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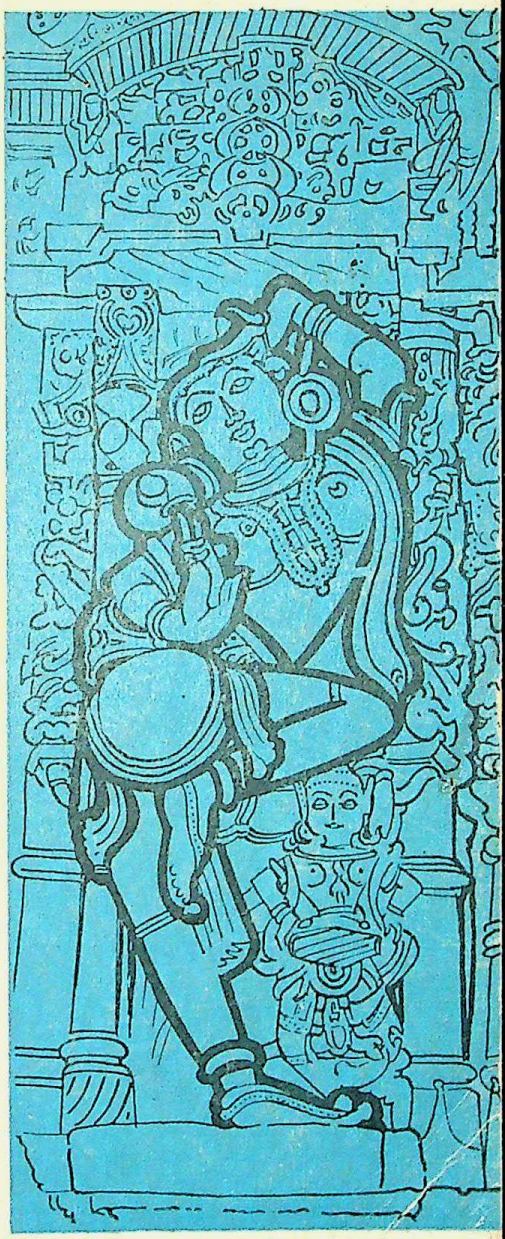

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DEPARTMENT OF ARCHAEOLOGY
GOVERNMENT OF INDIA

INDIAN ARCHAEOLOGY

By
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PREFACE

The Department of Archaeology, Government of India, has been bringing out for the last six years an annual publication called *Indian Archaeology—A Review*, containing a complete survey of the archaeological activities in the country. The information contained therein is supplied not only by the officers of the Department but by all others engaged in archaeological pursuits.

Early this month, Professor Humayun Kabir, Minister for Scientific Research and Cultural Affairs, India, desired that the *Review*, in a summarized form, should be annually translated into thirteen Indian languages, so that it could reach the general public of the country. He also directed me to prepare the standard English version which could be translated into the Indian languages by competent persons. This version is published here.

Before the public can be expected to appreciate the annual archaeological progress in the country, it should be acquainted with the background thereof. The first four chapters of this book are, therefore, in the nature of an introduction, which, if disproportionately long, is, I feel, necessary as providing the necessary background. The next numbers will confine themselves to a review of the annual progress.

In writing the first chapter, viz., the history of Indian archaeology before 1902, I have extensively utilized the article 'Indian Archaeology from Jones to Marshall' by Shri Sourindranath Roy, published in *Ancient India*, no. 9 (1953).

NEW DELHI :
The 15th October, 1959

A. GHOSH

INDIAN ARCHAEOLOGY

BEFORE 1902

1

The antiquarian wealth of India started attracting the attention of officers of the East India Company from the last quarter of the eighteenth century. In 1784, under the initiative and guidance of Sir William Jones, a Judge of the Supreme Court, was started in Calcutta the Asiatic Society, for enquiring into the history, antiquities, arts, sciences and literatures of Asia. Among the organizers of the Society was the Governor-General, Warren Hastings, who, ten years earlier, had received a letter from the famous English *litterateur* Dr. Johnson, exhorting him to 'examine nicely the tradition and histories of the East', 'survey the remains of its ancient edifices, and trace the vestiges of its ruined cities'. The establishment of the Society provided a great fillip to Asian studies. In 1788, a journal called *Asiatick Researches* was started and in 1814, a museum was established to house the object collected by the workers of the Society.

Archaeology, in the sense of the investigation and study of the relics of the past, formed, however, only a small part of the activities of the Society. Whatever limited archaeological work, in the form of reports on monuments, was undertaken was not on scientific lines but was mixed with legend and touched by a sense of wonder. Nevertheless, valuable work was done: for example, in 1788, Charles Wilkins provided the key to the decipherment of the Gupta and *kutila* scripts; Horace Hayman Wilson's exploration in Afghanistan was notable and the report thereon was remarkable for the age.

In 1800, Lord Wellesley deputed Francis Buchanan to survey Mysore. In 1807, Buchanan was again deputed to survey the topography, history and antiquities of Bengal For the next eight years, Buchanan surveyed the Districts of

Dinajpur, Rangpur, Purnea, Bhagalpur, Patna, Bihar, Shahabad and Gorakhpur. Though his report was never published, what little of it was made available in 1838 by Montgomerie Martin gives an idea of the keenness and accuracy of his observation.

In 1838, James Prinsep, Assay-master of the Calcutta Mint, unravelled the mystery of the Brahmi script; this was followed by the decipherment of the inscriptions of Asoka and the establishment of his contemporaneity with a few Greek rulers of the west, who are mentioned in his inscriptions. Early Indian history was thus placed on a sound chronological basis.

During this period, notable work was done by James Fergusson, who, for eighteen years (1829 to 1847), conducted an architectural survey of the country and systematically classified the monuments.

Till now, the Government had taken little interest in archaeological matters, except on a few occasions, such as the employment of Buchanan and sporadic efforts to repair the monuments at Agra and Delhi.

In 1844, following a request from the Royal Asiatic Society of Great Britain for the copying of the paintings of Ajanta and other caves and for the preservation of the caves, the Court of Directors of the East India Company decided to form a commission for collecting accurate information about the nature, extent and state of the existing monuments. Lord Hardinge proposed that the commission should be preceded by the preparation of preliminary reports on the monuments by qualified persons. Accordingly, a few officers were deputed to survey some monuments, but nothing more was done.

2

In 1861, Alexander Cunningham, an army-engineer, who had already acquired renown by his antiquarian activities, made a bold bid to end the stalemate by impressing upon Lord Canning, the Governor-General, the necessity of undertaking a systematic programme of exploration in the country. Canning accepted the proposal and established the Archaeological Survey of India, with Cunningham himself as the Archaeological Surveyor. This was the first time that the

Government unequivocally recognized its responsibility in regard to the monuments and remains of the country. At the same time, the preservation of monuments was not to be a function of the Survey.

From November 1861 to January 1865, Cunningham covered large parts of north India, following the accounts of the ancient Chinese pilgrims Fa-Hien and Hiuen Tsang. He surveyed an enormous number of monuments and remains and fully reported on them with elaborate illustrations. Unfortunately, the Government, for reasons unknown, decided to abolish the Survey in 1865.

During the next five years some attention was paid to the photographing of monuments and preparation of casts of, architectural pieces, but no real work was done. In 1870 Lord Argyll, the Secretary of State, realized that something more substantial should be undertaken and that could be possible only by a Central department. As a result, the Archaeological Survey of India once more came into being, with Cunningham as its Director-General. He was this time helped by two (later on three) Assistants.

During the next fourteen years, up to 1885, Cunningham and his Assistants travelled up and down the whole of north and east India, discovering monuments and remains, revisiting old ones and bringing to light coins, inscriptions, sculptures and other antiquities. These achievements may be summed up in his own words:

'I have identified the sites of many of the chief cities and most famous places of ancient India, such as the rock of Aornos, the city of Taxila, and the fortress of Sangala, all connected with the history of Alexander the Great. In India I have found the sites of the celebrated cities of Sankisa, Sravasti and Kausambi, all intimately connected with the history of Buddha. Amongst other discoveries I may mention the Great Stupa of Bharhut, on which most of the principal events of Buddha's life were sculptured and inscribed. I have found three dated inscriptions of King Asoka, and my assistants have brought to light a new pillar of Asoka, and a new

text of his rock edicts in Bactrian characters, in which the whole of the 12th edict is complete. I have traced the Gupta style of architecture in the temples of the Gupta kings at Tigowa, Bilsar, Bhitargaon, Kuthera, and Deogarh, and I have discovered new inscriptions of this powerful dynasty at Eran, Udayagiri and other places.'

Considering the extent and fruitfulness of the work done be Cunningham, the above is only a modest estimate of his achievements.

3

Cunningham's survey covered only north and east India. To take in west India, an Archaeological Survey of West India was constituted in 1873 under James Burgess, to whose charge was added the Archaeological Survey of South India in 1881.

In 1873, the Supreme Government issued instructions to the Local Governments to preserve monuments. In 1878, however, Lord Lytton, the Governor-General, realized that the preservation of monuments should be the responsibility of the Supreme Government, for he 'could not conceive of any claims upon the administrative and financial resources of the Supreme Government more essentially imperial than this'. This resulted in the appointment of H.H. Cole as the Curator of Ancient Monuments in 1881. During the next two years Cole did satisfactory work, but the post was abolished in 1883, and preservation of monuments once more became the responsibility of the Local Governments.

Cunningham himself took great interest in the collection and decipherment of inscriptions but felt that the available inscriptions should be systematically published according to the dynasties to which they belonged. Accordingly, John Faithful Fleet was appointed Government Epigraphist in 1883 for a period of three years. In 1886, E. Hultzsch was appointed Epigraphist for south Indian inscriptions.

Cunningham finally retired in 1885, to be succeeded the following year by James Burgess as Director-General. But the functions of the Director-General were to a very large extent

decentralized, as there were now three local Surveyors in north and east India, with Burgess in direct charge of west and south India. The system was too complicated to be effective.

Burgess retired after three years, whereupon the Government decided to abolish the Archaeological Survey of India as a Central organization. All archaeo ogical work devolved on the Local Governments, with the result that hardly any progress was recorded. This state of affairs continued till 1898, when the Government woke up to its responsibilities once more and proposed to divide India into five Circles for the purpose of preservation of monuments, each under an Archaeological Surveyor functioning under the principal Local Governments comprised in their jurisdiction. Hultzsch was to continue as the Epigraphist for south India. The scheme was approved for a period of five years.

4

Soon after his arrival in India in 1899 as Governor-General, Lord Curzon realized the chaotic condition into which Indian archaeology had fallen in the absence of any Central leadership. He noticed that hardly any Local Government was interested in archaeology, with the result that 'not merely are beautiful and famous buildings crumbling to decay, but there is neither principle nor unity in conservation or repair'. 'Were Germany the ruling power in India', he stated, 'I do not hesitate to say that she would be spending many lakhs a year on a task to what we have hitherto rather plumed ourselves on our generosity in devoting Rs. 61,000, raised only a year ago to 88,000'. In his famous address to the Asiatic Society of Bengal on the 6th February 1900, he declared: 'Epigraphy should not be set behind research any more than research should be set behind conservation. It is, in my judgement, equally our duty to dig and discover, to classify, reproduce and describe, to copy and decipher and to cherish and conserve.' His conception of archaeology was therefore comprehensive: it included exploration, excavation, research, epigraphy, publication and preservation of monuments.

In 1900, Curzon proposed to the British Government the revival of the post of Director-General for the supervision and co-ordination of the work of the Surveyors. He also proposed that the Central Government should give grants-in-aid to the Local Governments to the extent of a lakh of rupees per year for archaeological work. This was no doubt a compromise between Curzon's ideal of total centralization (which, as we shall see below, was achieved two decades later) and the existing situation.

The British Government having accepted the proposals, John Marshall came to India in 1902 at the age of twentysix as the first Director-General of the reconstituted Archaeological Survey of India.

AFTER 1902

1

John Marshall succeeded in organizing the archaeological activities of the country in a remarkably short period. Within a few years of his arrival, important monuments, such as those at Delhi and Agra, were thoroughly overhauled, excavation was undertaken at a few important sites and museums received a fillip. In 1904, the Ancient Monuments Preservation Act was passed 'for the preservation of ancient monuments, for the exercise of control over excavation in certain places, and for the protection and acquisition in certain cases of ancient monuments and of objects of archaeological, historical or artistic interest'.

Five Circles had been sanctioned in 1899 for a period of five years. Marshall insisted on the retention of the Survey on a permanent basis, for 'the work of the archaeological officers is of a kind which cannot be discharged by any other existing agency and it can only cease if the Government cease to admit their responsibility for the preservation of the ancient remains of the country'. In 1906, the Survey was placed on a permanent footing: it was to consist of the Director-General, Government Epigraphist and six Circles, to cover the whole of India (including Burma but excluding Mysore, which had its own organization).

Thus placed on a permanent footing and with well-defined policies to guide it, the Survey continued its work with greater vigour and confidence. Hundreds of monuments and sites were declared protected and brought under the purview of the Ancient Monuments Preservation Act.

In 1911, the fact that the Survey was almost exclusively in British hands was severely criticized at a conference of orientalists, with the result that in the following year the Government decided that competent Indians should be appointed to the Survey. It may be mentioned in this connexion that in 1921 the Government laid down that 40 per cent of the service should

be European and the rest Indian. It is needless to say that this rule ceased to exist long ago, and the Department of Archaeology is now entirely manned by Indians.

In 1921, under the Government of India Act, 1919, archaeology was made a Central subject, so that the Survey became entirely a Central organization, the Provinces being left merely with the power of declaring monuments and sites protected under the Ancient Monuments Preservation Act. Even this power was transferred to the Centre by the Government of India Act, 1935.

A brief mention may be made here of the excavations carried out by the Survey up to 1920. As under Cunningham, there was a preference for Buddhist sites: Sarnath, Rajgir, Sanchi, Sravasti, Kusinagara, Nalanda and the remains in the North-west Frontier Province received adequate attention: knowledge of Buddhist architecture, art and iconography advanced enormously. Of the city-sites, Bhita near Allahabad, Patna and Taxila in Rawalpindi District were excavated. The first place proved to be a commercial township of pre-Christian origin. Near Patna, the remnants of the Mauryan palace of Pataliputra were laid bare; it was believed that the palace consisted of a wooden structure resting over eighty or more stone pillars. The prolonged excavations at Taxila, started in 1913 and continued till 1934, brought to light three successive cities: the earliest, Bhir Mound, originating in about the fifth century B.C., must have witnessed the invasion of Alexander; the second, Sirkap, was established under the Indo-Greeks and had a most systematic town-planning during the days of the Indo-Parthians; and the third, Sirsukh, was established in Kushan times.

2

This, in brief, was the record of the Survey in the field of excavations when a momentous event took place, viz., the discovery of the Indus civilization at Harappa in Montgomery District of Panjab and at Mohenjo-daṛo in Larkana District of Sind, both now in Pakistan. Excavation at the first site was started in 1921 and at the second in 1922. It was

realized at the outset that the relics of the culture exposed at these two places (referred to as the Harappa culture in the following pages) were beyond the common range of Indian antiquities till then known. When brief results of the discoveries, which included steatite seals with strange writings on them, were published in London in 1924, foreign scholars at once noticed that similar seals had been found at some sites in Iraq in levels belonging to the third millennium B.C. The archaeology of India was thus at once pushed back by two thousand years, for till then there was hardly anything which antedated Buddha. All this created great enthusiasm in the country. In 1926, an Exploration Branch was created to cope with the increased work.

Such an important discovery could not be left unpursued. Extensive excavations were conducted at both the sites till 1931 and the remains of two large cities laid bare. A comprehensive exploration of Sind and Baluchistan was now called for, and this was undertaken between 1925 and 1931. In Sind, apart from the discovery of a large number of smaller stations of the Harappa culture, an outstanding discovery was an earlier culture at Amri and a later culture at Jhukar and Chanhu-daro In Baluchistan were discovered a large number of sites belonging to various dates, some earlier and others later than the Harappa culture.

The other excavations during the period included Nalanda, Paharpur and Nagarjunakonda.

3

Marshall retired from the office of the Director-General in 1928. Three years later, an all-round reduction in expenditure was in the air, as a result of which, in 1932, the Exploration Branch was done away with and funds for the normal work of the Department were drastically curtailed.

In 1932, to encourage outsiders, including foreigners, to undertake excavations, the Ancient Monuments Preservation Act was amended. Taking advantage of this, the American School of Indic and Iranian Studies and the Boston Museum of Fine Arts jointly excavated at Chanhu-daro, mentioned above, in 1935-36.

In 1935, the Yale and Cambridge Universities sent a geological-*cum*-prehistoric expedition to India under the leadership of Helmut De Terra. The expedition did most valuable work in the country, particularly in the north-west.

In 1939, the excavation-technique and -policies of the Department came under severe criticism from a distinguished British archaeologist, Sir Leonard Woolley, who had been invited by the Government to advise on the future policy on exploration and excavation. The condemnation, if based on hurried observations and prejudices, was not altogether baseless, for the fact was that Indian archaeologists had not kept in touch with the techniques of excavation improved in Europe and America, with the result that the methods followed by them were antiquated. Hardly any attempt had been made to establish sequences of cultures by deep excavations, and there was no systematic plan about the choice of sites to be excavated, so that the archaeology of large parts of the country had remained in the dark.

Between 1940 and 1944, the Department undertook extensive excavations at Ahichchhatra in District Bareilly and established for the first time a cultural sequence of the upper Ganga valley from the second half of the first millennium B.C. to about A.D. 1100.

4

In 1944, Dr. Robert Eric Mortimer Wheeler was appointed Director-General. During the next four years of his stay in India, the Department witnessed all-round progress. He reorganized the Circles and museums of the Department and trained Departmental officers and outsiders in modern methods in his excavations at Taxila in Rawalpindi District, Arikamedu near Pondicherry, Harappa and Brahmagiri in Mysore State. Each of these excavations brought forth significant results.

5

In 1950, the Constitution of India made far-reaching changes in the position of archaeology: instead of archaeology being a completely Central subject, as laid down in the

Government of India Acts, 1919 and 1935, it prescribed as follows:

(1) ancient and historical monuments and archaeological sites and remains declared by or under law made by Parliament to be of national importance should be in charge of the Central Government;

(2) ancient and historical monuments not belonging to the first category should be in charge of the State (Provincial) Governments; and

(3) both the Central and State Governments will have jurisdiction over archaeological sites and remains not belonging to the first category.

In pursuance of this, Parliament, in 1951, passed an Act declaring to be of national importance all the monuments and sites which had been previously protected under the Ancient Monuments Preservation Act, together with a large number of those situated in such States as were in pre-Independence days called the Indian States, over which the Government of India had no archaeological jurisdiction before.

The provisions of the Constitution envisage that the State Governments should have laws and organizations to preserve monuments and sites in their charge. Some State Governments have already equipped themselves accordingly and a few others are taking steps in this direction.

6

No review of the archaeological history of the country would be complete without a reference to the archaeological work in the Indian States prior to their merger in the Indian Union. Mysore had its own Department since 1900, to be followed shortly afterwards by Kashmir, Pudukkottai and Mayurbhanj. Later on, Hyderabad, Gwalior, Travancore, Cochin, Bhopal, Baroda and Jaipur joined the list. Some of these Departments did valuable work in protecting and preserving the monuments in their charge and even undertook excavations. A few other States were helped by the Central Government with finances and advice.

Following the disappearance of all Indian States with the Independence of India and the taking over of their important monuments by the Central Government as monuments of national importance, the major part of the staff of the Departments of Archaeology of those States where such Departments had existed was taken over by the Central Department in 1953.

In 1959, the staff and important monuments of Jammu and Kashmir were similarly taken over. The archaeological integration of India is now complete.

7

The Central Department of Archaeology, now attached to the Ministry of Scientific Research and Cultural Affairs of the Government of India, is a large organization spread all over India. At present it functions in the following way:

The Headquarters office is located at New Delhi. The Director-General of Archaeology is assisted by a Joint Director-General, three Deputy Directors-General, an Archaeological Engineer, an Assistant Archaeological Engineer and an Assistant Superintendent. Since the 15th October 1959, the Department has been running a School of Archaeology at New Delhi to train students in practical archaeology. The School has a Director.

There are nine Circles, each with a Superintendent and an Assistant Superintendent and a few with one or more Assistant Engineers. They are named and located as follows: North-western Circle, New Delhi; Northern Circle, Agra; Mid-eastern Circle, Patna; Eastern Circle, Calcutta; South-eastern Circle, Visakhapatnam; Southern Circle, Madras; South-western Circle, Aurangabad; Western Circle, Baroda; and Central Circle, Bhopal. Besides, a small Circle has now been created at Srinagar, with a Superintendent, for Jammu and Kashmir. The primary function of the Circles is the preservation of monuments; they are also responsible for all general archaeological work within their jurisdictions and may also undertake explorations and excavations. Thus,

within the last ten years, the North-western Circle has excavated at the Purana Qila, New Delhi, the Delhi fortifications and Alamgirpur in the upper Yamuna basin; the Northern Circle at Mathura and Sravasti in Oudh; the Mid-eastern Circle at Rajgir in Bihar; the Eastern Circle at Birbhanpur and Tamluk in West Bengal and Jaugada, Ratnagiri and Udayagiri in Orissa; the South-eastern Circle at Salihundam and Kotturu in Andhra Pradesh; the Southern Circle at Sanur, Pallavamedu, Amirthamangalam and Kunnattur in Madras; the South-western Circle at Bahal-Tekwada and Daimabad in the Godavari valley, Prakash in the Tapti valley and Maski in Mysore; and the Western Circle at Amreli, Rangpur, Mota-machiala and Lothal in Gujarat.

The Excavations Branch, situated at Nagpur, has a Superintendent, who undertakes major excavations. All the excavations under Wheeler were done by this Branch, which subsequently excavated at Sisupalgarh in Orissa, Hastinapura in the upper Ganga valley, Rupar, Bara and Salaura on the upper Sutlej and Nagda and Ujjayini in Malwa.

The Epigraphy Branch, situated at Ootacamund, consists of the Government Epigraphist, two Superintendents and three Assistant Superintendents. In addition, there is an Assistant Superintendent for Arabic and Persian inscriptions at Nagpur. The function of the Branch is obvious: it is to collect, edit and publish inscriptions found all over the country. The work done by the Branch has been very valuable for the reconstruction of the history of India, much of which depends on inscriptions.

The Chemistry Branch is headed by the Archaeological Chemist located at Dehra Dun. His function is to direct the chemical cleaning and preservation of monuments, sculptures, paintings and museum-objects and to undertake scientific research in his own field. He is assisted by two Assistant Archaeological Chemists, located respectively at Dehra Dun and Hyderabad, each of whom has two Junior Archaeological Chemists under him. The latter, stationed at Dehra Dun, Bhubaneswar, Aurangabad and Hyderabad, are in charge of work at monuments.

The Prehistory Branch at Nagpur, with a Superintendent and an Assistant Superintendent, undertakes research into the problems of the Stone Age archaeology. During the short period of its existence, it has explored the Tapti valley, the river-valleys of Bundelkhand and the Beas-Banganga valley.

The Museums Branch, with a Superintendent and an Assistant Superintendent functioning from Calcutta, is responsible for the museums belonging to the Department, viz., the Fort Museum, Delhi, the Fort St. George Museum, Madras, the Tipu Sultan Museum, Srirangapatna, and the archaeological museums at Sarnath, Nalanda, Bodh-Gaya, Sanchi, Khajuraho, Nagarjunakonda, Amaravati, Hampi and Kondapur.

The Gardens Branch, with a Superintendent and two Assistant Superintendents, one each at Agra and Delhi, is responsible for the gardens around a few important monuments.

In addition, special organizations are created for work of a temporary nature. For example, for the comprehensive excavation of Nagarjunakonda, which is to be drowned as a result of an irrigation-scheme, a unit, with a Superintendent and four Assistant Superintendents, has been established. To undertake the architectural survey of temples, there are two Superintendents at Bhopal and Madras, respectively for north and south India. An Atlas Branch has been created at Nagpur for the preparation of an archaeological atlas.

8

A happy sign of the present-day archaeological activities in the country is that many institutions, including universities and State Governments, have come forward to undertake archaeological work. The first such institution was the University of Calcutta, which excavated at Bangarh in Bengal as early as 1937-41. During the last ten years or so, valuable work has been done by the Deccan College Post-graduate and Research Institute, Poona, the Kashi Prasad Jayaswal Research Institute, Patna, the Universities of Allahabad, Sagar, Baroda, Calcutta and Varanasi and the Governments of Rajasthan, Saurashtra, Madhya Pradesh, Bombay

and Andhra Pradesh. Apart from important explorations, the chief sites excavated by these organizations are: Nasik, Jorwe and Nevasa in the Godavari valley (Deccan College); Tripuri on the Narmada (University of Sagar); Maheswar and Navdatoli, also on the Narmada (Deccan College, in collaboration with the University of Baroda and the Government of Madhya Pradesh); Baroda, Langhnaj and Vadnagar in Gujarat (University of Baroda); Prabhas-patan and Rojdi, also in Gujarat (Governments of Saurashtra and Bombay); Dhanora and Sirpur in Chhattisgarh (Government of Madhya Pradesh); Ahar near Udaipur (Government of Rajasthan); Kausambi near Allahabad (University of Allahabad); Rajghat-Varanasi (University of Varanasi); Pataliputra, Sonpur and Vaisali in Bihar (Jayaswal Institute); Chandraketugarh in West Bengal (University of Calcutta); and Yelleswaram and Utnur in Andhra Pradesh (Government of Andhra Pradesh).

LAWS RELATING TO ANCIENT MONUMENTS, SITES AND OTHER OBJECTS

References have been made above to the Ancient Monuments Preservation Act. As the public are not generally aware of this and other laws relating to ancient monuments, sites and other objects, it is considered desirable that they should be briefly noticed here.

1

The Indian Treasure-trove Act, 1878, lays down that when any person finds a treasure (i.e. an object hidden in the soil or in anything affixed to the soil) exceeding ten rupees in value, he should report the find to the Collector and deposit the treasure in the nearest Treasury or give the Collector a suitable security. If the Collector finds that the treasure was hidden one hundred years before the date of its discovery, he may declare it ownerless and divide the treasure or its value between the owner of the place and the finder of the treasure in the ratio of 25 and 75 per cent, unless an agreement to the contrary exists between the two parties; if the owner of the place does not present himself to claim the treasure, the whole of it may be given to the finder. The Collector may also, instead of dividing the treasure, decide to acquire it on behalf of the Government by paying the parties the value of the material of the treasure together with one-fifth of that value. If any person fails to report the find to the Collector or to deposit it in the Treasury or alters the treasure so as to conceal its identity, he will not be entitled to his share of the treasure and will, besides, be punishable with imprisonment for one year or fine or both.

The operation of this Act has enabled the Government to acquire ancient sculptures, hoards of coins, etc., which have gone to enrich museums. It should be noted that if the find of a treasure is reported to the Collector and if the Government decides to acquire the treasure, the finder and the owner will get one-fifth more than the actual value of the material.

Unfortunately, in spite of this, ignorant people often conceal their finds and melt down metal objects, thus causing harm to history and archaeology.

2

The Ancient Monuments Preservation Act of 1904, need not be noticed here in any detail, for it has now been largely superseded by the Ancient Monuments and Archaeological Sites and Remains Act mentioned below. It may be stated, however, that in spite of the provisions of the former Act having become largely out-of-date owing to changes in the system of government, it stood the Government in good stead for fifty-five years in the preservation of monuments, regulation of excavations and other allied matters.

The Antiquities (Export Control) Act of 1947, prescribes penalties for exporting or attempting to export out of India any object more than one hundred years old without a licence from the Government. The intention is to ensure that the country is not denuded of its antiquarian wealth.

3

On the 15th October 1959, the Ancient Monuments and Archaeological Sites and Remains Act, which had been passed by Parliament in the previous year, came into force. Besides adapting the sections of the Ancient Monuments Preservation Act to the present-day requirements, it contains some other salutary provisions. As it is desirable that the substance of the Act should be widely known, it is summarized below.

The provisions of this Act apply to all the monuments and sites which were declared to be of national importance in 1951, i.e. monuments already protected under the Ancient Monuments Preservation Act and some important monuments in the old Indian States. Besides, the Government may add fresh monuments and sites to the list by notification in the Gazette. All such monuments and sites are known as protected monuments and sites.

If a protected monument belongs to a private individual, the Central Government may enter into an agreement with the

owner regarding the maintenance of the monument and other matters. In case the owner refuses or fails to enter into an agreement, the Government may assume some powers for the maintenance of the monument and in certain ways restrict the owner's right over the monument.

If the Director-General of Archaeology believes that the owner of a monument intends to do anything which will endanger the safety of the monument, or to build on or near the site of the monument, he can order the person concerned not to do any such act.

If a monument is used for religious worship, it will continue to be so even after protection.

No person is allowed to excavate, mine, quarry, etc., at a protected site, but normal cultivation is allowed. No building can be constructed on a protected site without permission from the Government; if any is constructed, it may be removed by the Government at the builder's cost.

No person other than an officer of the Central Department of Archaeology can undertake excavation in a protected area without a licence from the Director-General of Archaeology. An officer of the Department can also excavate a site which is not protected.

If the site, whether protected or not, is owned by a private person, the Government may purchase the excavated objects from the owner.

If the Central Government feels that ancient objects are likely to be destroyed or removed or to fall into decay, or should be kept in a public place, it may purchase such objects. It can also direct that ancient objects should not be removed without permission from the place where they are.

Offences under the Act are punishable with imprisonment of three months or fine of five thousand rupees or both.

4

As the Rules framed by the Government under the Act, which simultaneously came into force, i.e. on the 15th October 1959, are of equal import, they may be noticed here in brief-

Generally speaking, protected monuments are open to the public from sunrise to sunset, except a few with gardens, which are open from sunrise to 10.00 p.m. and except those where the hours of opening are controlled by an agreement with the owner.

Access to monuments is free, except certain monuments where a fee of 20 naye paise is charged, but children below the age of fifteen are exempted. Such monuments remain open from 9.00 a.m. to 5.30 p.m. or sunset.

No meetings, conferences, parties, etc., except recognized religious ones, are allowed in monuments. Advertising, selling or canvassing for goods and acting as guides are prohibited except with a licence.

The preparation of drawings and photographs of monuments is, generally speaking, allowed, but the use of camera-stands and other articles which are likely to cause inconvenience to other visitors is not permitted. For the preparation of cinematographic films of monuments a licence is required.

If the Government feels that mining operations or construction of buildings near a protected monument should be prohibited or regulated, it can declare certain areas around the monument as prohibited or regulated. In a prohibited area no mining or construction is allowed; in a regulated area it may be allowed under a licence. Unauthorized buildings may be removed by the Government. These provisions are intended to ensure the safety and beauty of the monuments, but the affected persons will be duly compensated.

A penalty is prescribed in the Rules for the contravention of their provisions.

THE EARLY CULTURES OF INDIA

1

Man first appeared in India, as elsewhere in the world, in the hoary past, may be a hundred thousand or more years ago. No fossil-remains of Early Man have as yet been found in India, and he is identifiable only by the crude stone tools left by him.

The palaeolithic man lived when the climate of the earth was much more fierce than it is now: there were long periods of severe cold and snow-fall in the high altitudes; they were followed by equally severe dry and warm spells. In the adjoining plains there were corresponding periods of heavy rainfall and desiccation. All these resulted in immense changes in the face of the earth and the configuration of the land.

Palaeoliths are found on the old terraces of rivers, on deserted river-beds, in the deposits of boulders and gravels, in the sections of rivers and in caves. In India, no caves definitely bearing palaeoliths have as yet been discovered.

The first discovery of a palaeolithic tool in India took place in 1863 at Pallavaram near Madras; it was by Robert Bruce Foote of the Geological Survey of India. During the next seventy years or so, palaeoliths were discovered in large numbers practically all over India except, of course, the Indo-Gangetic plains, but there was no serious effort to place them against the geological context.

In Kashmir, geologists have noticed traces of glaciations and interglaciations, which might perhaps be of the same age as the corresponding epochs of the Pleistocene Age of Europe, but, unlike Europe, there are no palaeoliths associated with them. However, De Terra's expedition correlated the terraces of the river Sohan in Rawalpindi District, a tributary of the Indus, with the glacial and interglacial epochs of Kashmir. Palaeolithic tools are found on these terraces. The typical Sohan tool is made by chipping the upper part of a pebble on one side only, so as to produce an edge. Such tools

are called the unifacial chopper. Some scholars think that they were introduced in India from the east—Burma, Java and China. Recently, similar tools have been found near Kangra in the valley of the Banganga, a tributary of the Beas.

The tools found near Madras are of a different nature. Here, a lump of stone or a pebble is chipped on both the faces and shaped into a handaxe, cleaver, ovate, etc. Such tools, in extremely limited numbers, have been found in the Sohan region as well. In technique of manufacture they are similar to the Abbevillean and Acheulian tools of Europe and Africa.

The palaeolithic tools of India thus fall into two broad categories, i.e. the unifacial (Sohan) and the bifacial (Madras). It is fairly clear that the unifacial tools are generally confined to the sub-Himalayan region, while the bifacial ones are predominant elsewhere, though there may be some mixture here and there.

In recent years, there has been a spurt in palaeolithic exploration and research in the country, as a result of which hundreds of tool-bearing deposits have been found in the sections and terraces of many rivers in Panjab, Rajasthan, Gujarat, central India, the Deccan and the south.

2

In central India and the Deccan, the palaeoliths of the handaxe-cleaver tradition (now called Series I) were succeeded by tools of another tradition (called Series II), usually smaller in size and made of finer stones. The shapes also are more varied and include blades, scrapers, awls, engravers, etc. At least at Maheswar, on the bank of the Narmada, and at Nevasa, on the Pravara, a tributary of the Godavari, there is clear stratigraphic evidence that tools of Series II are much later in date than those of Series I, for the former occur much higher up in a distinctly separate deposit. Series II cannot, therefore, be regarded as the direct descendant of Series I.

Not taking into consideration the sizes, the shapes of the tools of Series II may be regarded as the predecessor of those of microliths, to which we now turn.

3

In Europe, Africa and west Asia, microliths have been ascribed to the Mesolithic Age, between the Palaeolithic and Neolithic Ages. In India, the evidence of a Mesolithic Age is at present not very definite. Indian microliths, however, can be divided into three distinct categories according to the context of their occurrence. The earliest microliths are those found in the red sand-dunes, locally known as *teris*, in the extreme south and at such places as Birbhanpur in Burdwan District, West Bengal; they are rather crudely shaped and occur without any other object. The microliths of the next category are found at such places as Nagarjunakonda n Andhra Pradesh and Langhnaj in Gujarat. Pottery had by then come into vogue. The third category belongs to the full-fledged chalcolithic period, which is dealt with below.

Neoliths, mostly polished stone axes, have been found in large numbers all over central India, the Deccan and south India. They also occur in north-east India, where, generally speaking, they are of a different shape: whereas in the former region they are round or oval in section, in the north-east they are oblong in section and are sometimes provided with a shoulder; it is likely that the north-eastern variety came to India from the east. Only a few purely neolithic sites, i.e. those antedating the advent of copper, have been excavated in the Deccan. From the limited evidence, it appears that in neolithic times a coarse black or grey pottery was in vogue. Microliths are also often found in the neolithic deposits.

In central India and the Deccan, neoliths and microliths occur along with copper. It is not unlikely that the neolithic tradition spread up to the Vindhyas from the south in chalcolithic times. But before dealing with the chalcolithic culture, we shall turn our attention to the north-west.

4

Mention has been made above of the discovery, in 1921-22, of the Harappa culture, which revolutionized the conception of the origin of the Indian civilization. This culture belongs

to the Bronze Age; it is typified by burnt-brick houses and a systematic town-planning and sanitary arrangements, the like of which was unknown anywhere till very recent times. Among the characteristic objects produced by the people were steatite seals, usually with the figure of an animal and one or more lines of writing, which has not yet been deciphered, wheel-made red pottery of typical shapes and sometimes with typical paintings in black colour, long blades of chert, bronze objects, terracotta figurines of divinities, human beings and animals, gold objects and beads of semi-precious stones.

Mohenjo-daro had seven Periods of occupation and Harappa eight. The present dating of the culture is 2500 to 1500 B.C.; it is based on the contacts of the culture with Iraq and also on general considerations.

Reference has been made to the explorations in Sind and Baluchistan, which resulted in the discovery of a large number of stations of the Harappa culture. In 1935, the site of Kotla-nihang in Ambala District was discovered. In 1940-41, along the dried-up bed of the river Sarasvati in Bahawalpur State (now in Pakistan) were found a few sites. In 1946, Harappa was re-excavated, as a result of which new facts about the culture were brought to light. During 1950–53, a large number of Harappan sites were found further up the Sarasvati and its tributary, the Drishadvati, in Ganganagar District in north Rajasthan. During the same period, relics of the culture were also detected at Rupar, very near Kotla-nihang; the site was extensively excavated during 1953–55. In 1958, a small settlement of the culture was noticed as far east as the valley of the Hindon, a tributary of the Yamuna, at a place called Alamgirpur in Meerut District.

In the south, Rangpur, in Jhalawad District in Gujarat, had been suspected long ago to contain relics of the Harappa culture, but this fact was definitely established by a renewed excavation of the site during 1953–55. The most important Harappan site in Gujarat is, however, Lothal in village Saragwala, District Ahmadabad, which has been extensively excavated from 1955 to this year. The southernmost station of

the culture till now known is Bhagatrao near the mouth of the Tapti.

Throughout the length and breadth of its occurrence, about 500 miles both west to east and north to south, the Harappa culture has uniform characteristics, though there are minor local variations; for example, at Lothal, besides the normal Harappan pottery, there are buff-coloured and black-and-red wares. The extent of the culture is, nevertheless, remarkable: surely, it was the most widespread of the Bronze Age cultures of Asia.

As a result of the renewed excavation at Harappa in 1946, it was noticed that one of the mounds of the place had a very high fortification around it. This indicates that the mound contained the important buildings of the city; life in the city, therefore, may not have been democratic. Further, a cemetery, in which the dead had been buried in an extended position, was identified.

At Rupar were found burnt-brick, mud-brick and stone walls, steatite seals and other typical objects of the culture. Here, too, a cemetery was excavated.

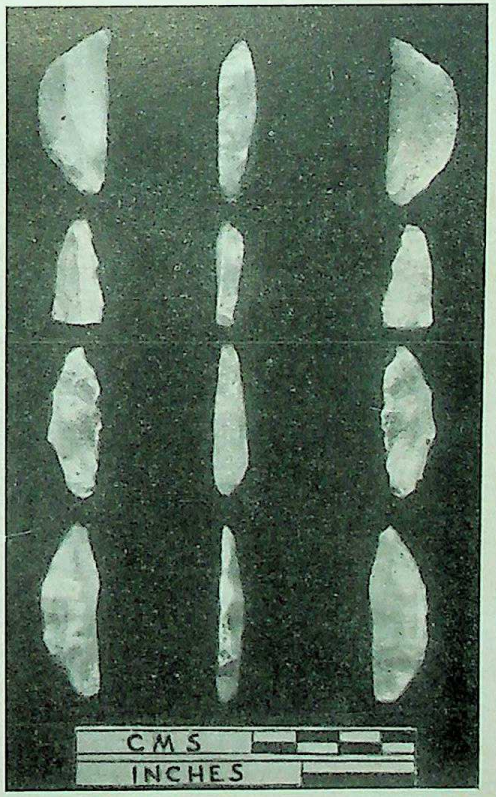
At Lothal, the people of the Harappa culture built a high mud-brick platform, probably to save their houses from flood, as the place is situated on low land not far from the sea. The platform was, however, washed away more than once. The houses were generally of burnt bricks, with bath-rooms and drains joining main drains along the roads.

While it is easily understandable that the Harappan people reached the east as far as the Yamuna valley by following the river-routes, it may be surmised that they reached Gujarat by sea.

5

How this mighty Harappa culture originated is not known. Though it had contacts with Iraq, it is unlikely that the Harappans had migrated from some place in west Asia. In Baluchistan and Sind, several chalcolithic cultures are known to have

A

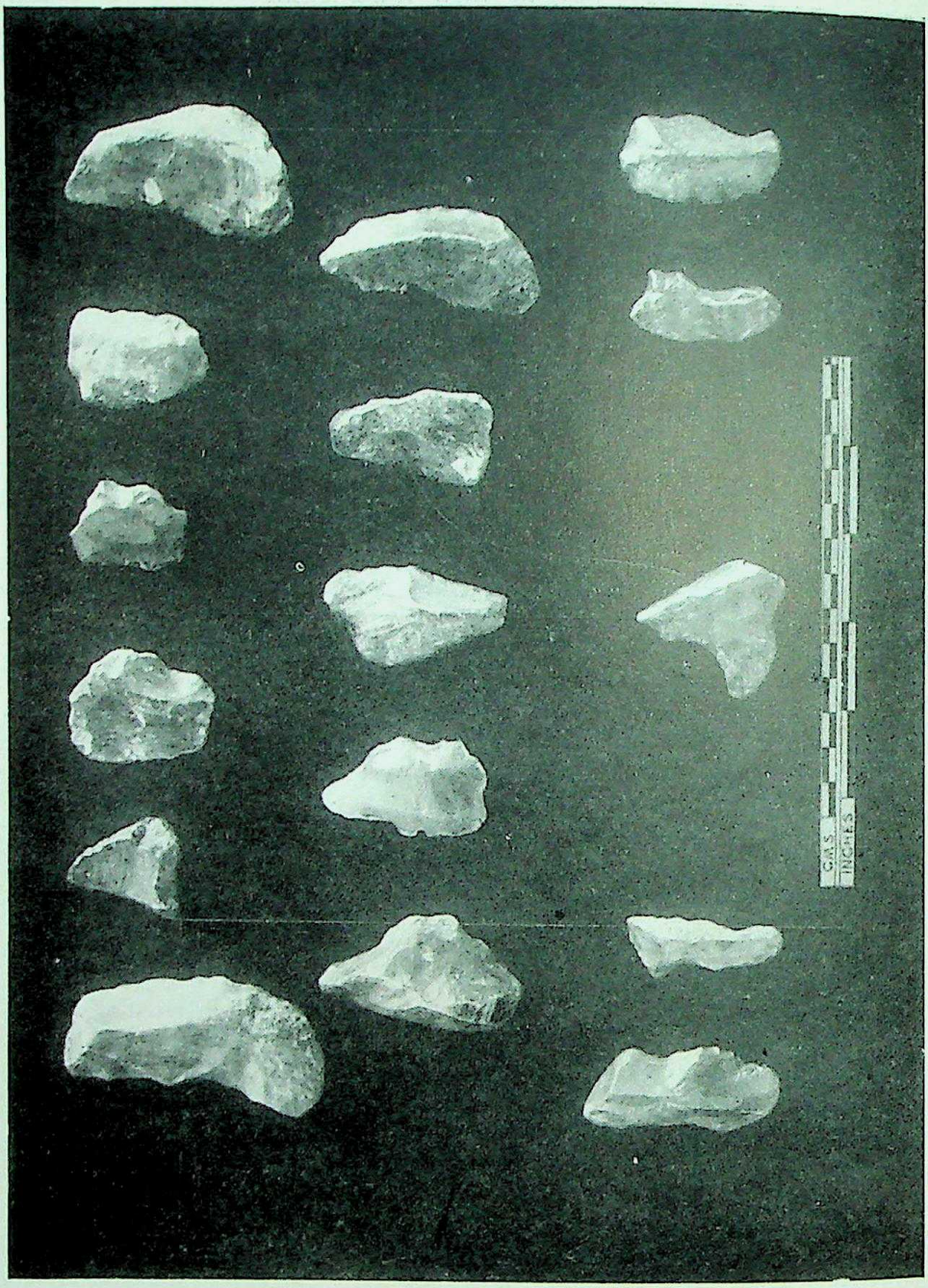


B

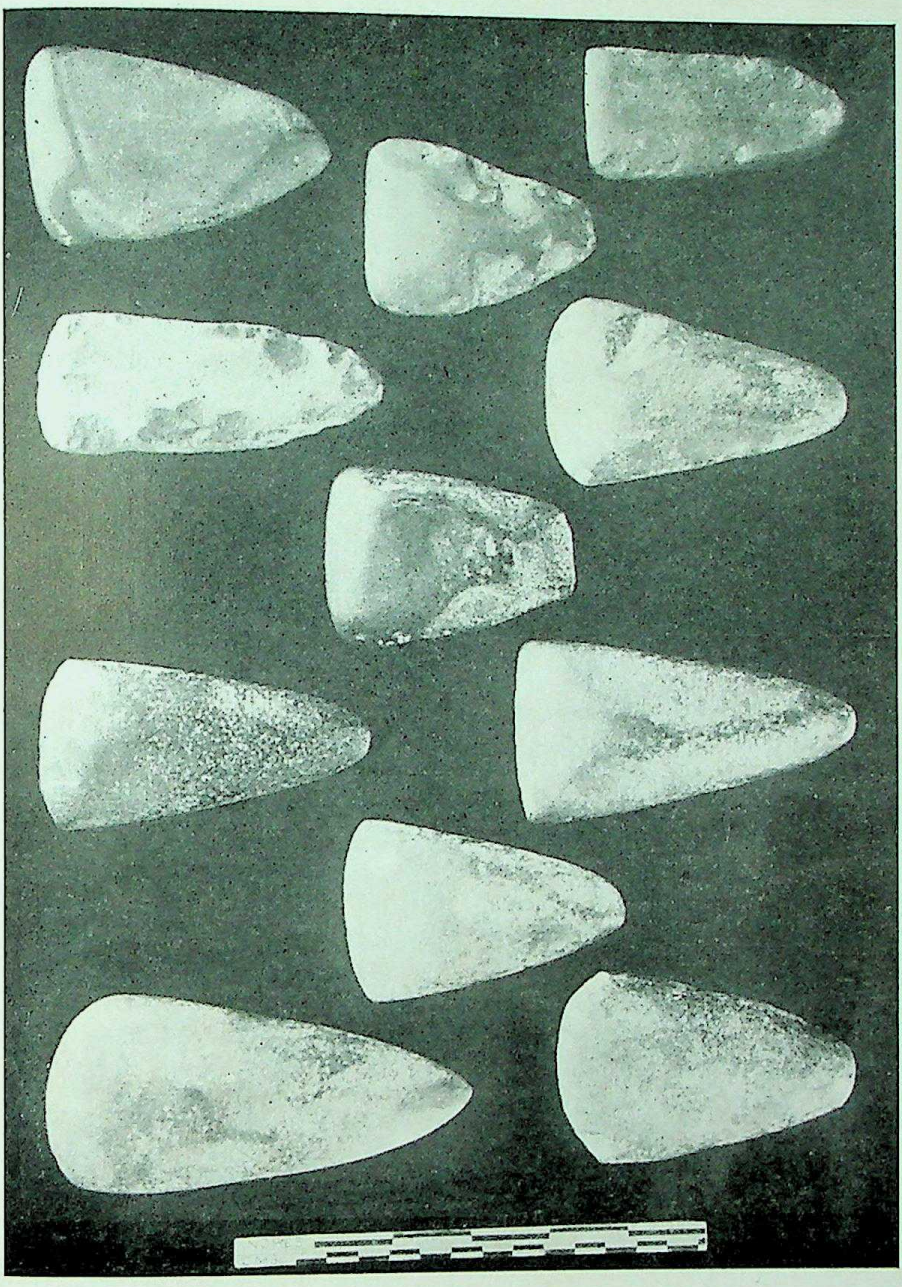
A. *Palaeolithic handaxes, cleaver, and chopper, from different sites ovate.*
B. *Birbhanpur (West Bengal) : microliths.* *See pp. 20 and 22.*

PLATE I

PLATE II

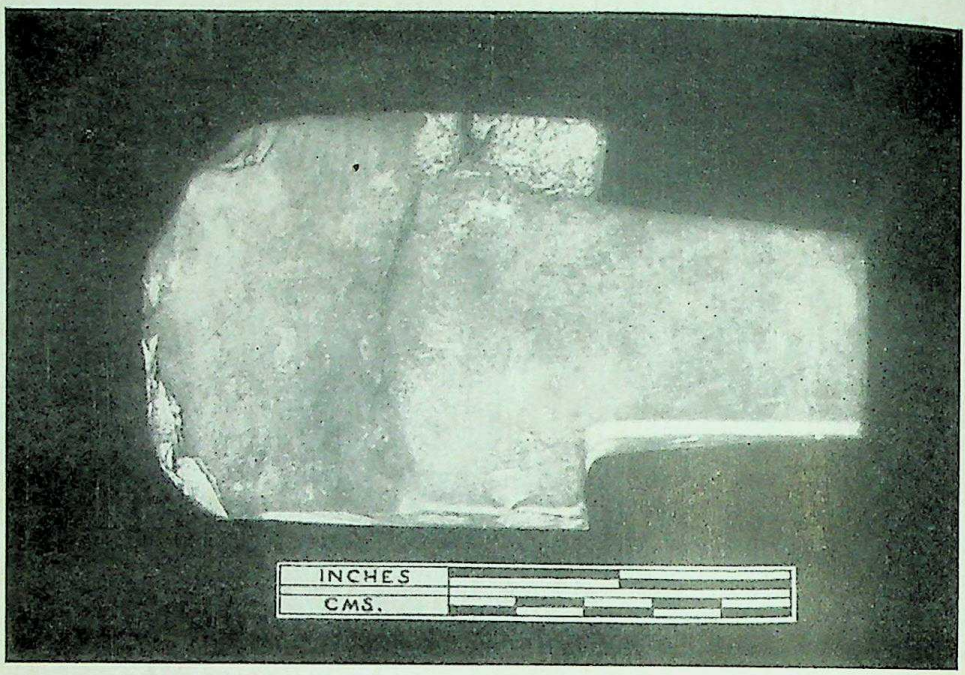


Amlotha (Tapti valley) : stone tools of Series II. See p. 21



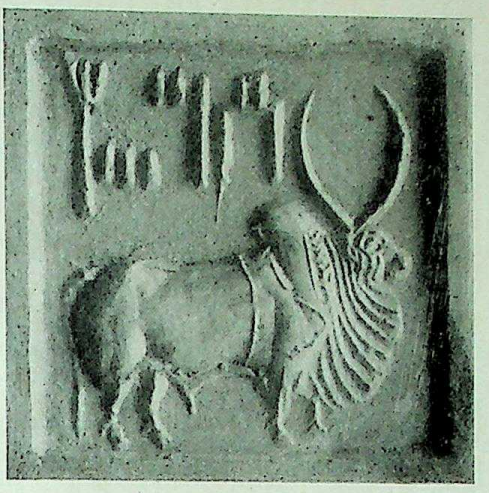
Brahmagiri (Mysore State) : polished stone axes. See p. 22

PLATE IV



A. *Deulbarh (West Bengal) : shouldered stone celt. See p. 22*

B. *Mohenjo-daro : impression of a steatite seal. See p. 23*

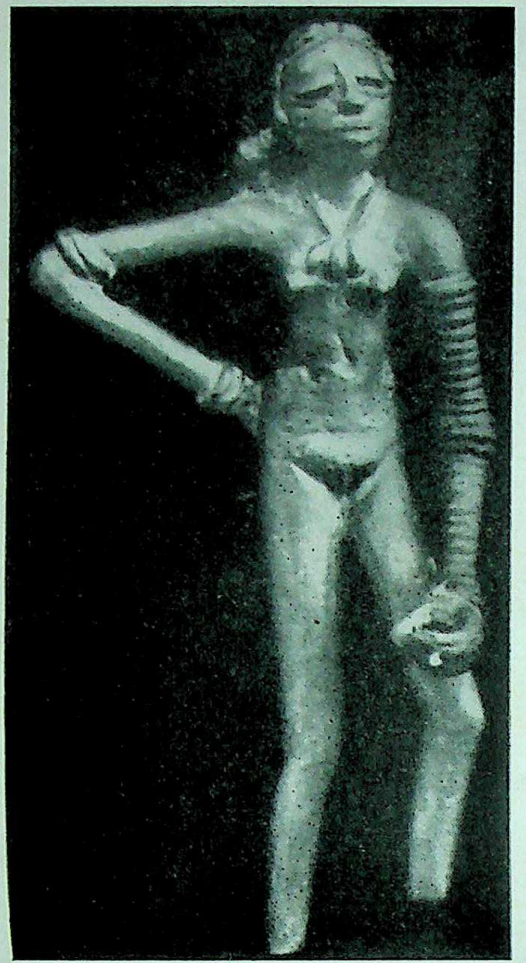


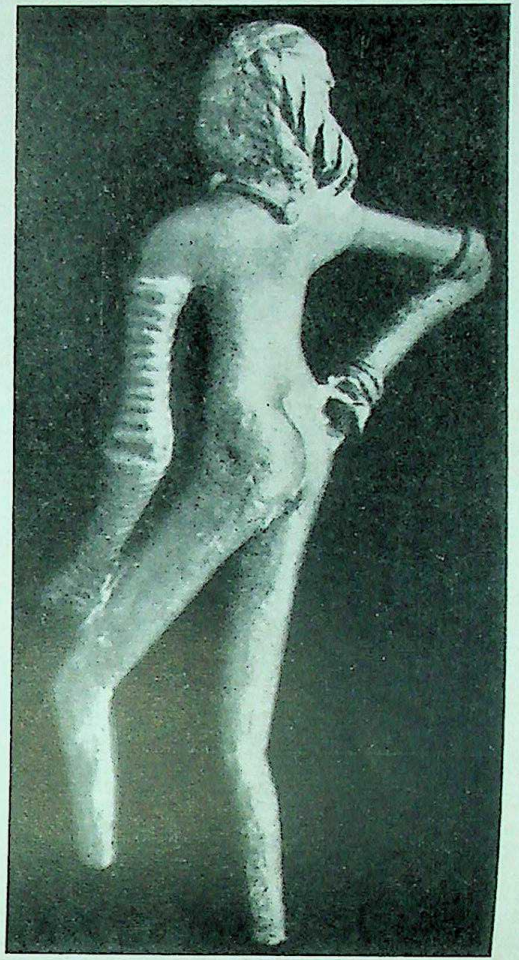
A

B

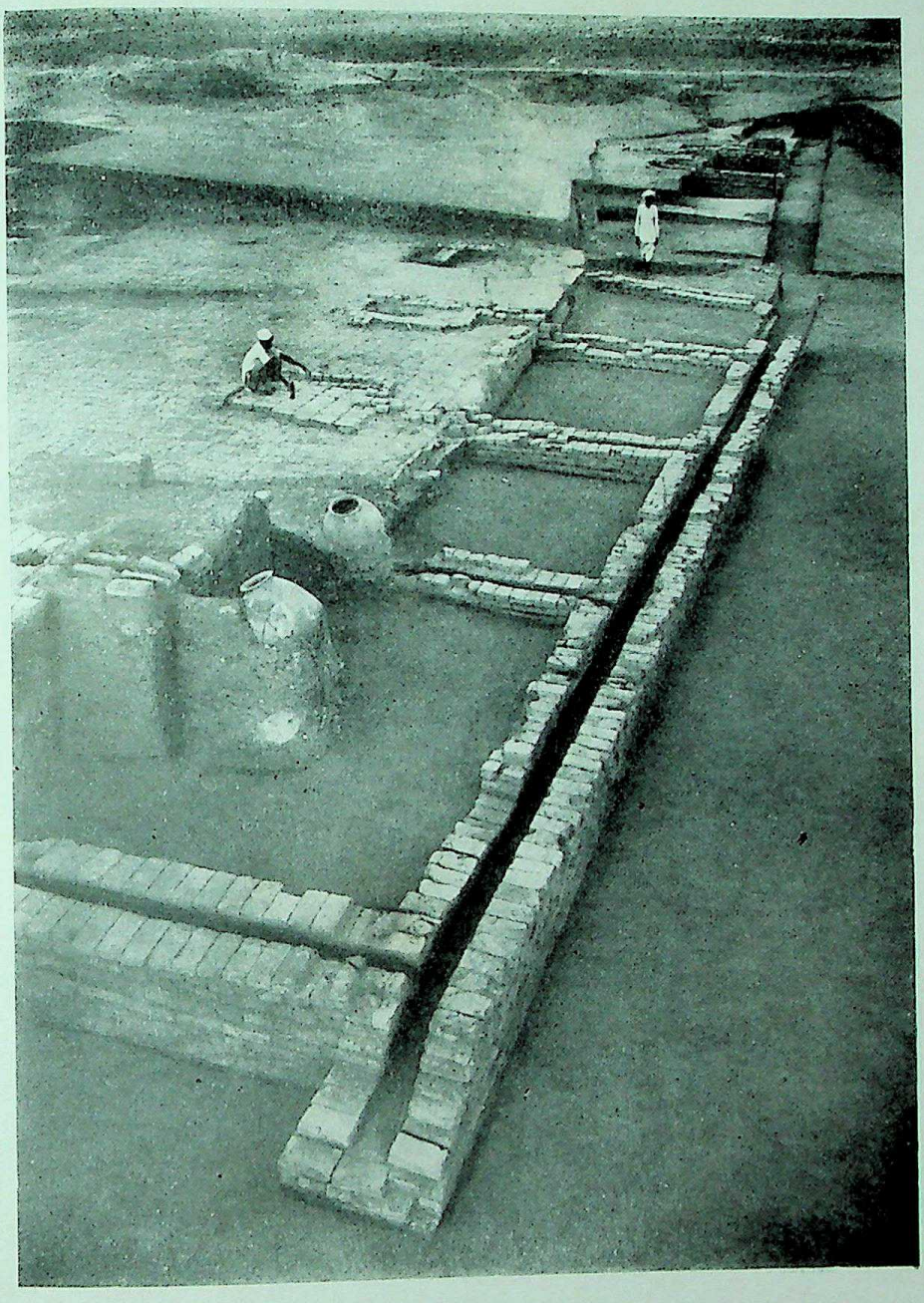
Mohenjo-daro : steatite seals.

See p. 23





Mohenjo-daro : bronze dancing girl. See p. 23



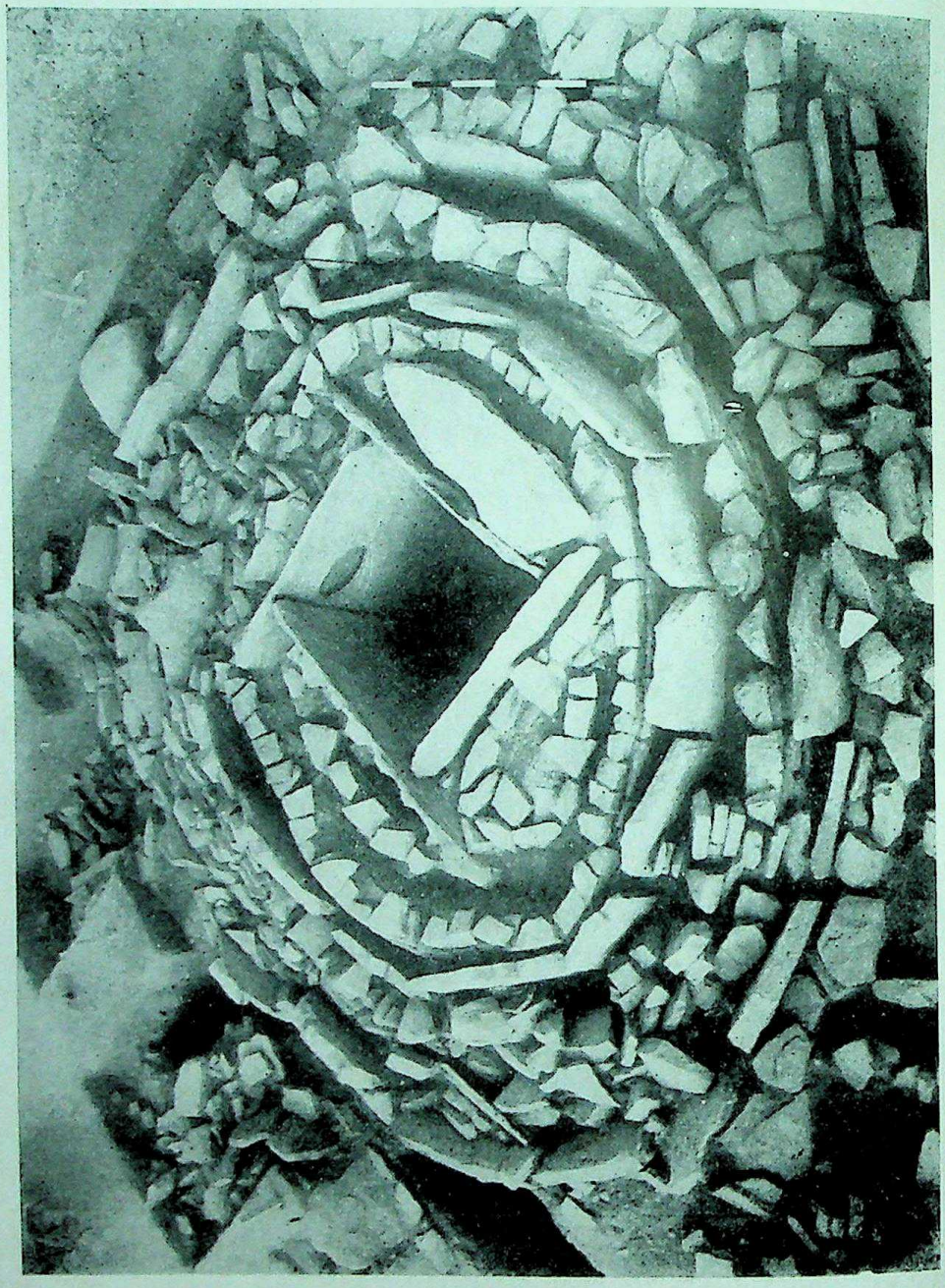
Lothal : public and private drains. See p. 31

PLATE VIII

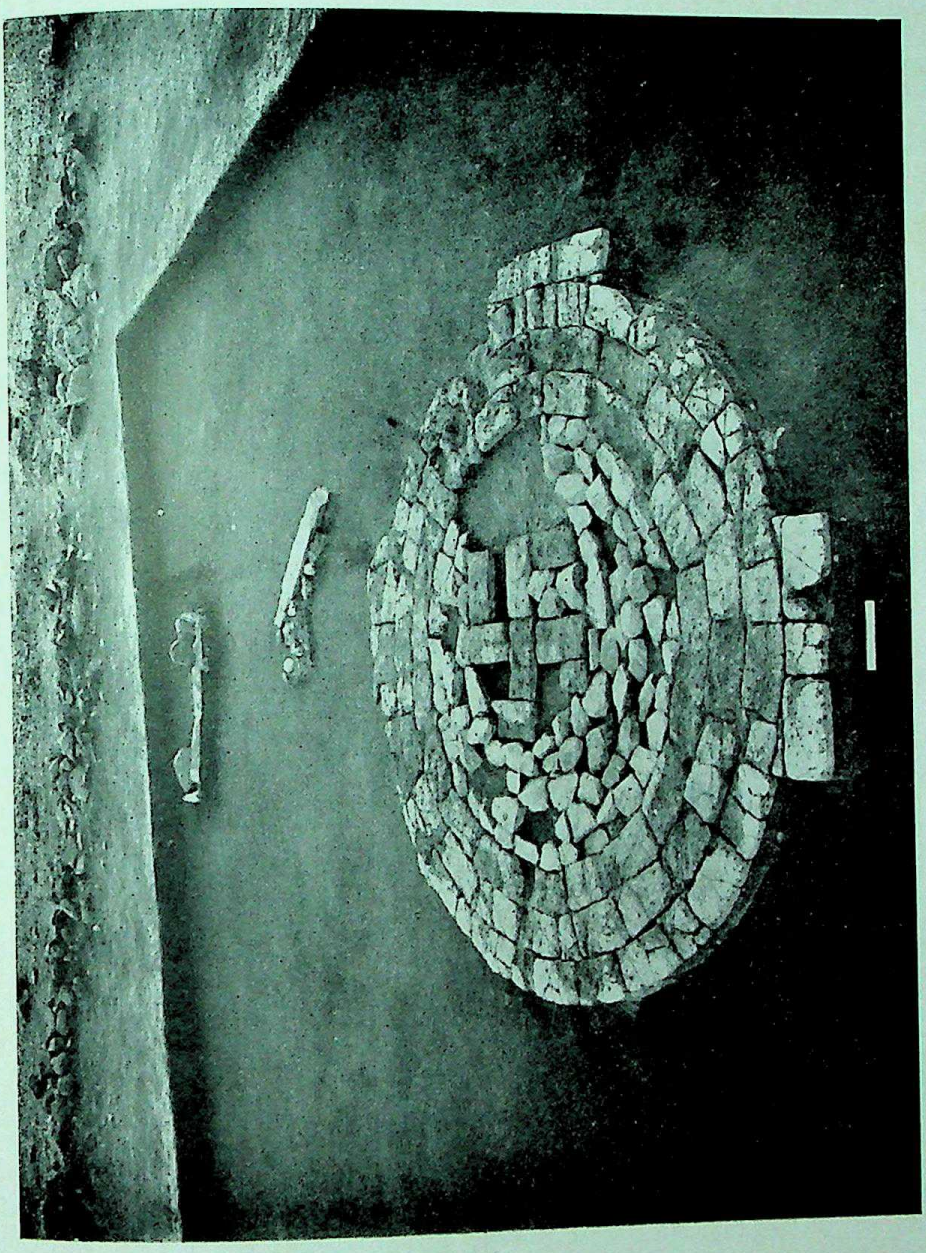
Lothal : houses and drains. See p. 31

Hastinapura : painted Grey Ware. See p. 27

PLATE X

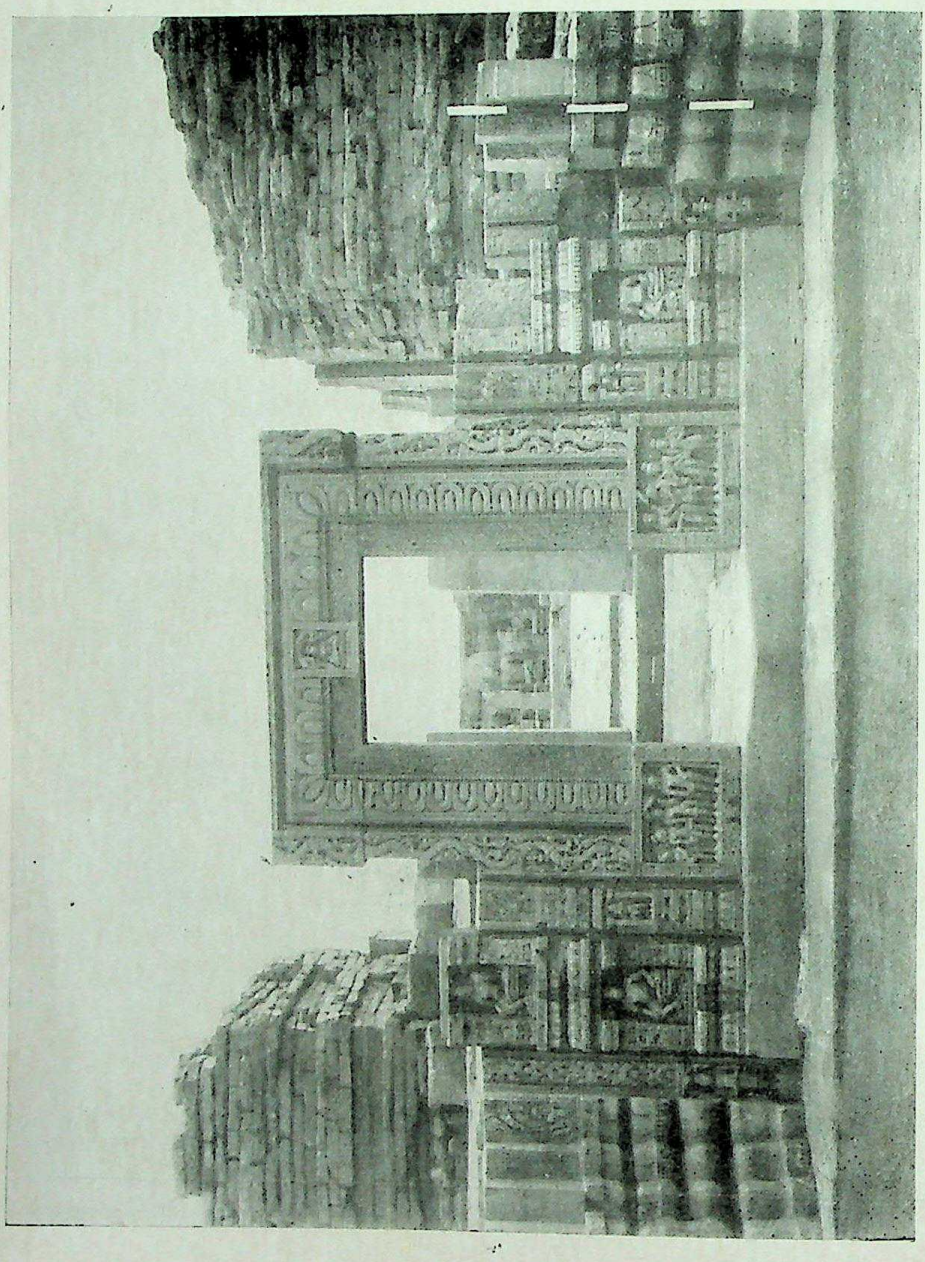


Brahmagiri (Mysore State) : a megalith, after excavation. See p. 28

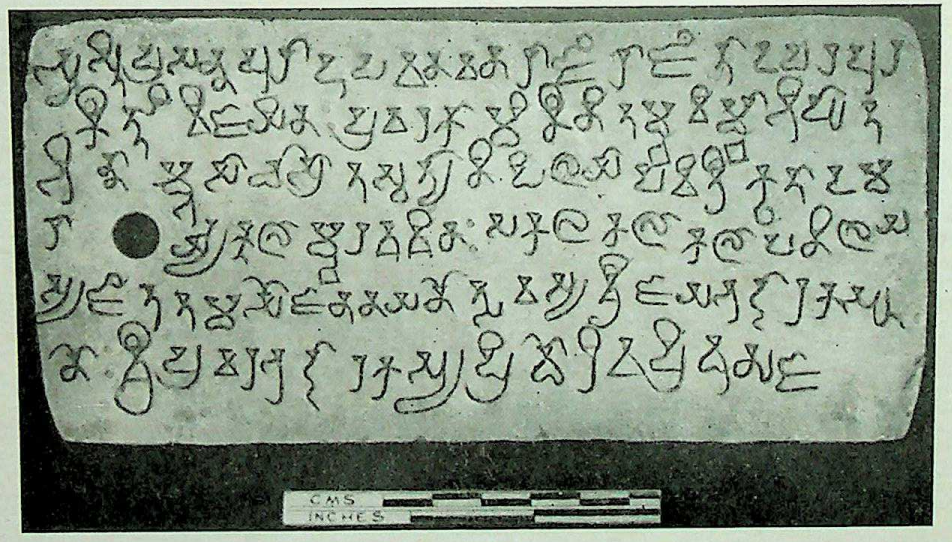


Nagarjunakonda : stupa with svastika base. See p. 38

PLATE XII



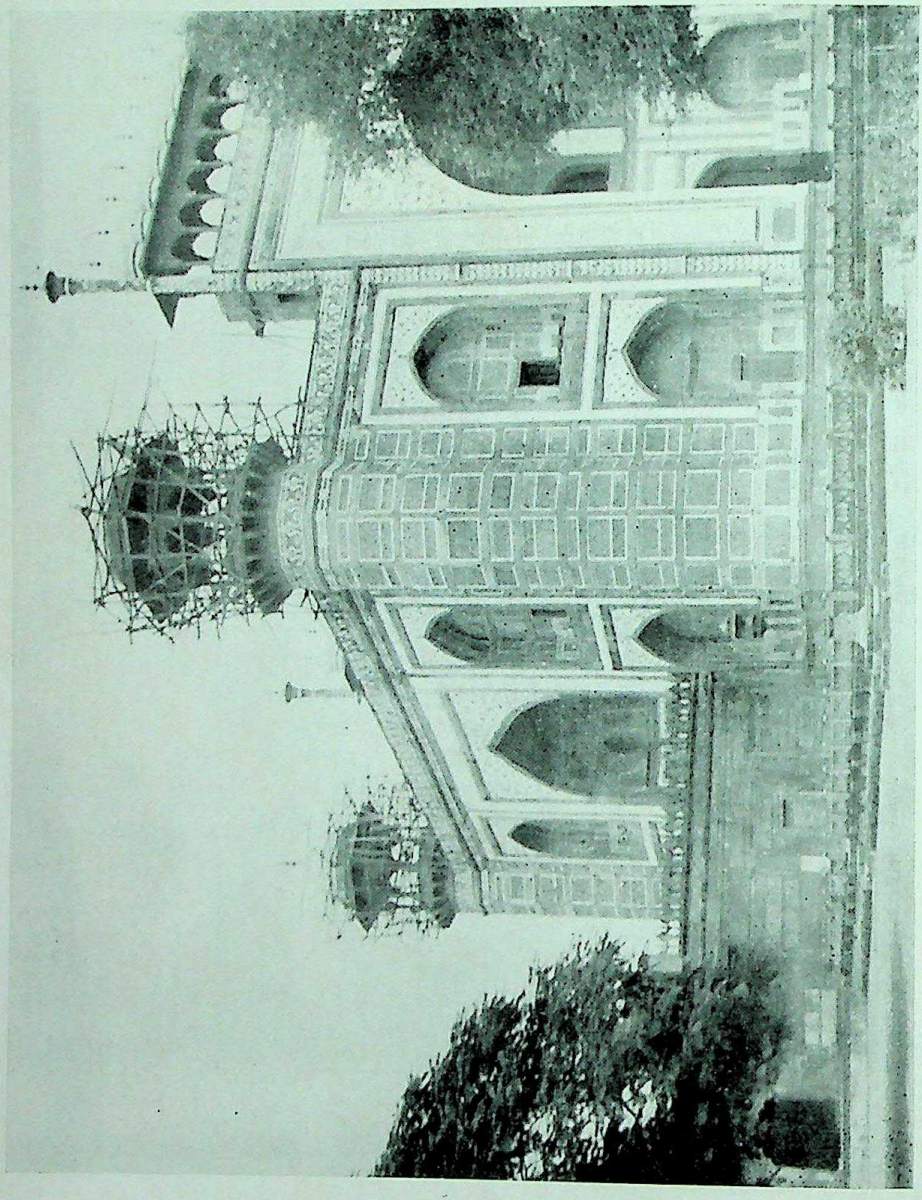
Ratnagiri (Orissa) : gateway of a monastery, after excavation. See p. 39



Mallar (Madhya Pradesh) : a copper-plate grant of Vyghraraja. See p. 41

PLATE XIII

PLATE XIV



Agra : Taj Mahal main gate, during repairs. p. 51

existed before the advent of the mature Harappa culture. Mention has already been made of Amri in Sind. In Baluchistan, pre-Harappa cultures are represented at Kulli, Mehi, Rana-Ghundai, Quetta, Togau and other places; some of them continued till Harappan times. Baluchistan was evidently the home of small and isolated village-communities. While there may be a few features which some of these cultures share with the Harappa culture, none of them can be regarded as the parent of the Harappa.

Nor have we any definite knowledge about the end of the Harappa culture. Many reasons have been suggested, for example, foreign invasion, flood and desiccation of the land, but none of them is definitely certain. The archaeological evidence in the north is indefinite. At Mohenjo-daro, it is seen that the culture was already on the decay during the last days of the city; there was also some destruction brought about by outside agencies. At Jhukar and Chanhu-daro, in Sind, the Harappa culture was succeeded by a later one, known after Jhukar and characterized by a pottery of buff or cream colour with paintings in purple or red colour; there is nothing to show that it was directly derived from the Harappa culture. Harappa itself had a culture, known as Cemetery H, which was superimposed over the ruins of the true Harappa culture; it was mainly represented by burials in large jars, the colour of and paintings on which (and on the other pottery associated with which) were totally different from those on the Harappan pottery. The burials took place well after the desertion of the site by the Harappans.

Further east, in the northern plains, the Harappans were followed by a people who used a distinctive pottery known as Painted Grey Ware, to which we shall turn presently, but there is distinct evidence that they occupied the sites well after the Harappans. There is, therefore, still a gap in the archaeology of north India after the disappearance of the Harappa culture.

The story in Gujarat may have been somewhat different. Here, at Rangpur and, limitedly, at Lothal, the Harappa and

the culture that succeeded it have several common features: some shapes in the pottery in the latter seem to have been derived from typical Harappan shapes. It is likely, therefore, that the one was derived from the other.

Late phases of the Harappa culture are also found at many places in the Gujarat peninsula, e.g. Rojdi. Gujarat had also some other late cultures, e.g. the one represented at Prabhas-patan, which at present seem localized.

6

The excavation at Brahmagiri in Mysore State brought to light a chalcolithic culture, with grey and red pottery, the latter with paintings in black, neoliths, microliths—long blades of chert—and a few copper objects. Later researches have shown that chalcolithic cultures were widespread in the second half of the second millennium and first half of the first millennium B.C. throughout the Deccan and central India. The following chalcolithic sites have till now been excavated; Brahmagiri and Maski in the Tungabhadra valley; Nasik, Jorwe, Nevasa and Daimabad in the Godavari valley; Bahal and Prakash in the Tapti valley; Maheswar, Navdatoli and Tripuri in the Narmada valley; and Nagda in the Chambal valley. In each zone the culture had its individual characteristics; but there are some broad features which are common to all, viz., the use of neoliths and microliths, copper objects and red pottery with paintings in black. There is also a broad chronological overlap among these cultures, including the post-Harappan cultures of Gujarat, though in some zones the beginnings of the culture might have been somewhat earlier than in others.

At Ahar, near Udaipur in Rajasthan, the chalcolithic culture is mainly represented by microliths and a painted or unpainted black-and-red ware.

At some of the northern sites, the chalcolithic culture was succeeded by a culture with a black-and-red ware, produced by firing the pots in an inverted position, so that the inside of the pots not exposed to air turned black and the exposed exterior turned red. At the city of Ujjayini in Malwa, occupation

began, in about the seventh century B.C., with this culture. Iron had come into use by then.

7

As stated above, in the northern plains the Harappa culture was followed by a culture characterized by the use of pottery known as the Painted Grey Ware. In the excavation at Rupar in Ambala District, it has been noticed that there was a gap between the end of the Harappa culture and the beginning of the Painted Grey Ware culture.

The Ware has been found at many places in northern Rajasthan, Panjab and west and central Uttar Pradesh. The chief site with this Ware which has been excavated is Hastinapura, District Meerut, where the Ware overlies a crude red ware. It has been suspected that the latter ware is associated with the hoards of copper implements found from time to time in the Ganga valley.

At Hastinapura and Rupar, the Painted Grey Ware occurs with red and black-and-red pottery. There are no burnt bricks. Iron occurs only towards the end of the Period, which, at Hastinapura, took place as the result of a heavy flood.

The Painted Grey Ware culture flourished in the first quarter of the first millennium B.C. From the facts that the Ware is found in the regions which were occupied by the Aryans when they settled in India (except West Panjab, which has not been explored from this point of view) and at places which are mentioned in ancient Indian literature, it has been felt that the Ware was produced by the Aryans.

8

The next landmark in Indian archaeology is the advent of a pottery with a fine lustrous surface, usually black in colour, though many other shades have been found; it is known as the Northern Black Polished Ware. At such sites as Kausambi, District Allahabad, and Rajghat-Varanasi, it is found in profuse quantities. It has, therefore, been felt that the Ware

had its origin in the central Ganga plains, whence it spread practically all over India: it has been found in the north-west at Taxila and in the south at Amaravati in District Guntur. From the fact that at Taxila it occurs in levels prior to those in which coins of Alexander have been found, it appears that the Ware originated some time in the fifth or sixth century B.C. It is found superimposed at many sites in western and central India and the Deccan over the chalcolithic remains. It seems to have ceased to exist after the second century B.C.

It was during this period, the beginnings of which were marked by the advent of Buddha and Mahavira, that large cities sprang up in the north. Burnt-bricks were freely used in buildings, iron came into vogue on an extensive scale and coinage was introduced. The period was no doubt a very flourishing one: it marks the advent of the early historical period.

9

In south India, a new culture came into existence in the second half of the first millennium B.C., probably in the latter part of this period. It is marked by a characteristic burial-practice, in which the dead bodies were at first exposed and a few disjointed bones were then entombed in graves enclosed by large stone boulders and covered by large stone slabs. These monuments are known as megalithic monuments and the culture represented by them as the megalithic culture. The graves vary in shape from region to region and are sometimes devoid of any stones at all. But all of them have some common characteristics: apart from the fractional burial mentioned above, the tombs contain pots of the Black-and-red Ware and iron objects. The megalithic culture was evidently introduced by a new people. Some scholars think that it was the Dravidians.

At Brahmagiri and Maski, the megalithic culture was superimposed over the chalcolithic culture referred to above and was followed by a culture contemporary with the Satavahanas of the first century A.D. This last culture has a typical

pottery which is russet in colour and is painted with linear designs in white.

In the first century A.D., peninsular India came into touch with the Roman empire, with which it was engaged in brisk trade. Thousands of Roman coins, which came to India as a result of the trade, have been found in India, particularly in the south. Excavation at Arikamedu near Pondicherry, which must have been a coastal trading-station, has brought to light imported Roman ware, such as the pottery manufactured at Arezzo in Rome and stamped with the potter's name, the Rouletted Ware and the amphora. Bright-red pottery, reminiscent of the Samian Ware of Rome, belonging to the first century and onwards, has been found at many places in India, particularly in the west.

10

Many of the excavated sites in north and central India, for example, Rupar, Hastinapura, Mathura, Ahichchhatra, Sravasti, Rajgir, Chandraketugarh, Ujjayini, etc., contain remains of occupations post-dating the Northern Black Polished Ware. During these periods, coins of rulers of known dates and seals and inscriptions, to which dates can be given on grounds of palaeography, help in the dating of the objects. While a few types of pottery, terracotta figurines and other objects occur far and wide, unifying factors, such as the Northern Black Polished Ware, are not very common, and regional features become more and more pronounced.

Occupation on a few of these sites continued right down to late medieval times, a characteristic of which is the glazed pottery.

11

The above is a brief survey of the early cultures of India, as revealed by excavations, which is necessary for the proper understanding of the annual progress of archaeology in the country. It is not intended to give the reader an idea of the varied monuments and other antiquities of India, for that would require a separate treatment.

ACTIVITIES DURING 1958-59

EXCAVATIONS

1

During 1958-59, a large number of sites were excavated all over the country.

UTNUR.—At Utnur in District Mahbubnagar, the Department of Archaeology of Andhra Pradesh found a neolithic settlement, with rows of post-holes showing the alignment of stockades around it. The site had evidently been burnt down many a time, for several strata of burnt material were found in the excavation. Carbon-14 test of a piece of charcoal by the British Museum has shown it to be 4120 ±150 years old.

T-NARASIPUR.—The Department of Archaeology, Government of Mysore, excavated at T-Narasipur in District Mysore. The first occupation at the site was represented by a typical neolithic pottery, notably a thick grey ware, with a few brown and orange-red sherds; the grey sherds had sometimes incised designs and the organge-red ones curved lines in violet. Side by side, in the early layers, there was a type of grey pottery, with its lip painted in red ochre; there were also two channel-spouted vessels in grey ware. Polished stone axes and pounders were found in large numbers; as there was no copper, the settlement should be regarded as neolithic and not chalcolithic in nature. Except for a fluted core microliths were absent.

Period II yielded the typical megalithic Black-and-red Ware. There was also an iron dagger.

2

LOTHAL.—Excavation was continued at the now-famous Harappan site of Lothal in District Ahmadabad by the Lotha Excavation Project of the Department.[1]

[1] In the following pages, the word 'Department' means the Department of Archaeology, Government of India.

Within the excavated area, four streets, two running north-south and the other two east-west, and two lanes were exposed. Flanking one of the streets was a row of twelve houses with their bath-rooms connected with a public drain. To dispose of sullage-water, soakage-jars and cess-pools were made use of.

A large brick enclosure, 710 ft. long on the east and west and about 120 ft. long on the north and south, might represent a dockyard which ships could enter from the sea-side through a gap in the eastern wall. In the southern wall there was a channel with grooves for a sliding door which could regulate the level of water.

The occupation of Lothal fell into five Phases, of which the first four belonged to the mature Harappa culture and the last to a late stage thereof. In the last Phase, the town-plan was not as elaborate as in the earlier ones. New ceramic types were evolved from the earlier ones, though a few typical Harappan shapes and other objects continued side by side.

In the cemetery-area, ten graves, belonging to both the early and late stages, were excavated. In three of them, all belonging to the early stage, there were two skeletons placed side by side. If examination shows that in each case one skeleton is of a male and the other of a female, the prevalence of a custom resembling the *sati* would be indicated.

The small finds included six seals with animal-figures, one of which was that of a tiger. A terracotta sealing depicted a composite animal—with the trunk of an elephant, horns of a bull and an erect tail looking like a snake.

The designs on the pottery were painted in black over a red surface and chocolate over red and buff surfaces. Birds holding fish in their beaks, cranes, stags, peacocks, sparrows and snakes formed the common designs.

ROJDI.—The Department of Archaeology, Government of Bombay, continued its excavation at the Late Harappa site of Rojdi in District Madhya Saurashtra. The occupation belonged to three Phases. In the first Phase, the settlers on

the site erected a low platform to build their mud and mud-brick houses on. The pottery was generally of fine clay and was well-fired. It was treated with a red or chocolate slip and was generally unpainted except for a few bands in black. Small tools of chert, copper implements, spiral gold rings, copper bangles and beads of carnelian, faience and terracotta were in use. In the next Phase, in addition to the red ware, also occurred a buff ware. The designs were painted in black on a red, buff or chocolate slip. The houses were built of rubble and mud plastered with lime and had rammed-earth floors.

In the last Phase, there were only rubble structures. In addition to the Late Harappa pottery, the pottery characteristic of Period II of Prabhas-patan was found.

ALAMGIRPUR.—A discovery of great importance during the year was the identification of a site of the Harappa culture at Alamgirpur in Meerut District, 28 miles north-east of Delhi, near the bank of the Hindon, a tributary of the Yamuna.

Excavation by the North-western Circle of the Department revealed four Periods of occupation, the earliest of which represented the Harappa culture. Though no structure was found in this Period, there was evidence of burnt-bricks and oblong tiles. The pottery included typical Harappan shapes, such as the dish-on-stand, goblet with pointed base, etc. The painted designs on the pottery consisted of bands, triangles, squares, intersecting circles, plants and the peacock. Some troughs bore incised symbols, and on one was the impression of cloth.

The terracotta figurines represented the bear, humped bull and snake. Other terracotta objects comprised cakes, carts, cubical dice, beads, one of them gold-coated, and bangles. Bangles of faience, beads of steatite and semi-precious stones and pins and a broken blade of bronze or copper were also found.

After the desertion of the site by the Harappans, it was re-occupied by the people using the Painted Grey Ware, along with the black-slipped, black-and-red and plain red

wares. Two wheeled toy-animals of terracotta, dice, styluses, pins and arrow-heads of bone, small discs of black jasper, paste and bone and beads of glass were also found. Copper and iron continued in use side by side throughout the Period. Large lumps of clay with reed-impressions suggested that the houses had been built of reeds plastered with a thick layer of clay.

The thin deposit of Period III bore pottery which elsewhere has been found along with the Northern Black Polished Ware, though that Ware itself was not found.

The last Period contained medieval pottery and *lakhauri* bricks.

From the above, it is clear that the four Periods of Alamgirpur represented respectively the Harappa, Painted Grey Ware, early historical and late medieval cultures.

3

NAVDATOLI.—In continuation of previous work, the Deccan College Post-graduate and Research Institute, Poona, re-excavated at the chalcolithic site at Navdatoli on the bank of the Narmada, in District Nimar West, in collaboration with the Government of Madhya Pradesh and the University of Baroda.

The village-settlement represented at the site had been rebuilt at least ten times, falling into four Phases. The houses were circular, square and oblong; those of Phases I and II had floors of lime. An interesting feature of Phase I was a large neatly-cut pit with slanting sides and post-holes all-round. Inside it were two logs of wood, placed almost at right angles to each other, and two unique pots.

From the stumps of charred posts, the plans of a number of houses of Phase III could be made out. Generally, each room measured 10 ft. × 7 ft. The walls and roofs of the houses had bamboo-matting plastered with clay and white-washed.

A few objects of copper and thousands of chalcedony blades were found. Among the former was a fragmentary

sword or dagger with a raised mid-rib, similar to those from Iran.

Of the pottery, common to all the Phases was the Malwa Ware, a pale red-slipped ware with paintings in black. Some shapes in the Ware continued from the beginning to the end. In Phase I, there were a few specimens of white-painted black-and-red ware, which is found in profusion at sites in Rajasthan, such as Ahar. In the same Phase was also a white-slipped ware; often with a painted band of running antelopes and a group of dancing figures.

In Phase III, the Jorwe Ware made its appearance. Also came into use the channel-spouted bowl in the Malwa Ware, the shape being very common at the chalcolithic sites in Iran.

Carbon-14 datings of a few objects from Navdatoli tend to show that Phase I belonged to the sixteenth or seventeenth century and Phase IV to the twelfth or thirteenth century B.C.

DAIMABAD.—Another chalcolithic site excavated this year was Daimabad in District Ahmadnagar, on the Pravara, a tributary of the Godavari. The site had three Phases. The pottery of Phase I was thick and grey, similar to that of Period I of Brahmagiri, but there was a limited quantity of black-painted red pottery as well; to the latter class belonged a large jar, painted with a jungle-scene consisting of a human figure approached by a pair of enchanted deer, with peacocks in between, in the upper row and three tigers running in the opposite direction in the lower row. In Phase II, the typical pottery was the black-painted red ware. A channel-spout, typical of the Narmada-Godavari chalcolithic culture, was also found. In Phase III, there was a predominance of the Jorwe Ware.

Microliths were found in all the Phases, while copper was found in Phases II and III. A large number of neolithic celts were collected from the surface.

Graves with extended burials were common in all the Phases. For children, urn-burials were in vogue: they consisted of two urns with bones placed mouth-to-mouth, sometimes with a third one placed beside.

4

VAISALI.—The Kashi Prasad Jayaswal Research Institute, Patna, excavated at Raja-Visal-ka-garh, which represents the old city of Vaisali, in District Muzaffarpur.

The city had around it a fortification-wall, which belonged to three Periods. The earliest wall, now represented by brick debris only, was built on a deposit with the Northern Black Polished Ware. The wall of Period II was made of heaped-up earth, the digging of which left a moat all round. In Period III, the defences consisted of a thick brick wall with a row of military barracks. To judge on the basis of the finds, it appears that the defences dated from the Sunga to the Gupta ages.

Within the city was found a network of brick structures of three Periods, of roughly the same dates as those of the defences.

In one trench there was a small pot with gold and silver objects, including ear-ornaments, ear-rings, a hair-clip, humped bulls and a standing human figure in Mathura-Kushan style. Another pot near by contained silver amulets and beads of semi-precious stones.

KAUSAMBI.—The University of Allahabad continued its work at the defences of Kausambi on the Yamuna in District Allahabad. The defences had five main Periods, the earliest of which was built on a deposit with remnants of walls and floors.

Period I of the defensive wall had six and Period II four Sub-periods. From the beginning to the end, the wall was a mud structure with a baked-brick facing. It was surrounded by a wide moat, flanked by a road.

In the Northern Black Polished Ware, which appeared for the first time in the sixth sub-period of Period I of the wall and continued throughout Period II, there were painted and incised specimens. Besides, there were a few grey sherds with paintings and plain grey and red wares, in the last of which there were a few shapes calling for special attention.

SRAVASTI.—The Northern Circle of the Department excavated at Mahet, the site of the city of Sravasti, in District

Bahraich. Excavation showed that the occupation of the site antedated the construction of the fortification-wall. This occupation was characterized by a few sherds of the Painted Grey Ware, along with a pottery which may be regarded as the precursor of the Northern Black Polished Ware, the latter Ware itself, black-and-red ware and polished black ware, sometimes painted in buff or cream colour. Also were found bangles of green glass, beads of semi-precious stones and terra-cotta and other miscellaneous objects.

In the rampart, which came up in Period II, there were four Sub-periods. In the earliest, it was made of heaped-up earth; in the second, a brick wall was built over the earth; in the third the height was increased by earth-filling; and in the fourth was again erected a brick structure over it.

In this Period, the pottery underwent a marked change and consisted of red and thick grey wares, in shapes typical of the Sunga strata of north Indian sites. Coins of the Ayodhya series, terracotta *naga* figures and plaques with *mithunas*, glass and crystal beads, etc., were also found.

In the excavated area within the city, it was noticed that occupation had begun during Period II of the rampart. The next Period was represented by early medieval pottery.

Taking all things into consideration, it appears that Period I of Sravasti began in the second quarter of the first millennium B.C. and Period II belonged to the middle of the third to the middle of the first century B.C.

UDAYAGIRI.—At the top of the Udayagiri hill in District Puri, famous for its rock-cut Jaina caves, an apsidal structure, made of laterite blocks, was excavated by the Eastern Circle of the Department. Within the structure was a circular wall, evidently the remains of the main place of worship. At a later date the circular structure was converted into an apsidal one.

The pottery found in the area was red but was ill-baked. The only other discovered object was a stone celt, found in the filling of the floor.

This is the first apsidal structure found in east India. It evidently provided the place of worship to the monks residing in the cells. It is also likely that it was constructed by the famous king Kharavela, (first century B.C.), whose inscription occurs on the rock-face below the structure.

CHANDRAKETUGARH.—The University of Calcutta continued its excavation of Khana-Mihirer-dhipi at Chandraketu garh in 24-Parganas. The brick structure excavated here represented a temple of the Gupta period; it was square on plan, with projections in the middle of each of the three sides—eastern, southern and western—and a vestibule attached to the middle of the northern side.

The occupation at the site fell into three Periods. Period I, antedating the temple, showed signs of wooden and bamboo structures with tiled roofs. The shallow dish in grey ware was common. A few terracotta figurines, some with Kushan characteristics, were found. The pottery of Period II was varied and included grey, black and red wares. Period III was unimportant and had only a few significant pottery-types.

5

AMARAVATI.—The *stupa* at Amaravati, District Guntur, had been despoiled long ago. An excavation of the site by the Nagarjunakonda Excavation Project of the Department this year brought to light the damaged portion of the original drum, *ayaka*-platforms and *pradakshina-patha*. The other structures in the neighbourhood fell into three Periods. Period I was associated with the Northern Black Polished Ware, Period II with the Rouletted Ware and Period III with the Chinese Celadon Ware and Tantric icons. Five crystal caskets were recovered from slots made for them in the *urdhva-patha* of the railing. A large number of Buddhist sculptures were found.

NAGARJUNAKONDA.—Excavation at the site of Nagarjunakonda in Guntur District, which will be drowned as a result of an irrigation-project, continued in full swing under the Nagarjunakonda Excavation Project. Apart from Buddhist monuments for which it is famous, the valley also contains

palaeolithic and microlithic tools, neolithic remains, megaliths, Brahmanical edifices and the citadel of the Ikshvaku rulers of the second-third centuries A.D.

One of the sites yielded microliths unassociated with pottery, while another had microliths with pottery with a brown slip. A third area, with a large number of neolithic axes, had pits with animal-bones, microliths and pottery, mostly hand-made.

Within a megalith was found an oblong grave-pit with a broken skull, iron objects and pottery.

Stupa 9, partly excavated previously, revealed four structural Phases, the renovation of the third Phase having taken place in the ninth year of the rule of Ehuvala Chamtamula. A small inscription found in a chamber of the *stupa* mentioned *kumara-siri-Vira*, i.e., Virapurushadatta when he was a prince. Near by was a *stupa* with a *svastika* at the centre of the base. Another *stupa*, made of rubble, was originally decorated on the exterior with sculptured slabs. Other Buddhist monuments were also unearthed.

On the bank of the Krishna was discovered a stone inscription belonging to the ninth year of the Abhira king Vasishthiputra Vasushena and recording the consecration of a wooden image of Ashtabhujasvamin. In the same area was found a conch-shell bearing the inscription *Athabhujasamisa* and an incised *chakra* on pedestal flanked by *ankusa* and *chhatra*.

On the northern slope of the Nagarjuna hill was located a cremation-ground, presumably of the royal family. Two sculptures found in the area were interesting: one was that of a lady lying in state and the other represented a lady against a ladder, as though jumping into fire.

The fortification-wall of the citadel had two Phases. In Phase I, it consisted only of heaped-up mud and *morum* with a wide ditch beside it. In Phase II, a brick wall was constructed over it.

YELLESWARAM.—The Government of Andhra Pradesh continued its excavation at Yelleswaram in District Nalgonda

on the Krishna, on the opposite bank of Nagarjunakonda and brought to light objects of the Satavahana period, such as red- and black-slipped pottery, terracotta figurines and lead coins. Further below were found three megalithic burials with the typical pottery. In one of them were found two human skulls and other bones. Near by were the remains of a structure of wedge-shaped bricks, presumably a *stupa* and a *ghat*.

RATNAGIRI.—Excavation at the Buddhist ruins on the Ratnagiri hill in District Cuttack in 1957-58 by the Eastern Circle of the Department had revealed a substantial *stupa* with a large number of votive *stupas* around it. This year, the remains of two impressive monasteries to the north of the *stupa* were laid bare.

The entrance to the first monastery was elaborately planned and embellished. The door-frame of chlorite was beautifully carved and had the figure of Gaja-Lakshmi on the lintel. On both sides were images of Buddhist deities in different compartments. There were also the representations of Ganga and Yamuna.

In the back wall of the monastery was the shrine, containing a colossal image of Buddha in *bhumisparsa-mudra*, made of coursed khondalite.

The monastery was solidly built and, in addition to the verandahs and cells, common to Buddhist monasteries, on the ground floor, had at least one upper storey. In its subsequent rebuilding, necessitated by the collapse of its walls, most of the cells of the ground floor were filled with brickbats and the habitation was shifted to an upper level; two of the cells which were not filled up were provided with arched doors. The courtyard and verandahs were, however, cleared of fallen debris, so that they could be used again. The shrine also was re-conditioned with alterations and embellishments; it was provided with a lofty superstructure, now entirely collapsed, probably of the nature of a *sikhara* of the contemporary Brahmanical temples of Orissa.

The other monastery, separated from the first by an alley, was found in a more ruined condition. The cells in the eastern and southern rows each had an anteroom; both the main rooms and anterooms had arched roofs. Each anteroom had also a decorated stone window in its back wall. The shrine in the back wall of the monastery contained a khondalite statue of Buddha standing in *varada-mudra*.

On architectural considerations, the first monastery may be regarded as having originated in about the eighth century and as having continued in use till about the thirteenth century. The second monastery was established at a date somewhat later than the first but was earlier than the period of the restoration of the latter.

A large number of stone and bronze images of Buddha and Mahayana-Vajrayana Buddhist deities, hundreds of clay tablets with Buddhist texts, architectural and sculptural pieces, etc., were found in the excavation. Of particular interest were the seals with the legend *sri-Ratnagiri-mahavihariy-arya-bhikshu-samghasya*, which show that even in olden days the name of the place was Ratnagiri.

6

LAL-KOT, DELHI.—The North-western Circle of the Department excavated at the area to the west of Adham Khan's tomb and brought to light interesting details of the fortification-system of Delhi in early medieval times. The fortification-wall was constructed both of bricks and stone and had semi-circular bastions at intervals. To the east of the Qutb-Minar traces of the wall of the Lal-Kot citadel were found.

INDRAGARH.—The Government of Madhya Pradesh excavated at Indragarh in District Mandasor, discovering the plan of a collapsed temple, a large number of carved stone and images and three inscriptions, one of them belonging to the thirteenth century. Away from the temple-site were found structures of three Periods, belonging to the eighth to the twelfth centuries.

Three furlongs away from the temple was a site with microliths, pottery and unfinished beads.

CHITOR.—The Western Circle of the Department undertook excavation in the Mahasati enclosure within the Chitor fort, where Rajput ladies are believed to have committed *sati*. Structures of five different Periods were found; belonging to the third and fourth Periods were three shrines and an enclosure, within which were thick layers of ashes. Close-by were three pits, also full of ashes. Three *sati*-stones were also found.

EPIGRAPHY

A large number of inscriptions were discovered during the year. The more important of them are noted below.

1

Information was received that an inscription of Asoka had been found near Kandahar in Afghanistan. Written in Greek and Aramaic, the edict was issued when ten years of the emperor's reign had passed.

2

Of the Brahmi inscriptions, mention may be made of the following: two from the Buddhist caves at Pitalkhora, District Aurangabad, one recording the gift of a native of Dhenukakata; several from Nagarjunakonda, of the thirteenth year of the Ikshvaku king Vasishthiputra Ehuvala Chamtamula; two from Mathura, one of which is dated in the year 4 of the Kushan king Kanishka and the other in the year 92 of the Kanishka era; and one from Saurashtra, a three-line record of the Kshatrapa period.

3

A Sanskrit inscription from Mathura of the fifth century mentions a ruler Nripamitra and a poet Ditta. Three sets of copper-plates of the rulers of Sarabhapura, respectively Jayaraja, Pravararaja and Vyagharaja, were found at Mallar, District Bilaspur. A painted record of the Gupta period was noticed in a rock-shelter at Dharampuri near Bhopal. A sixth-century inscription from Chitor mentions a *rajasthaniya* of Dasapura (Mandasor) and Madhyama (Nagari), one Varaha,

a merchant named Vishnudatta and a temple of Manorathasvamin. An early-medieval copper-plate, found in District Darbhanga, refers to king Jivagupta and his father Ramagupta.

4

An interesting rock-inscription from Tarachandi, District Shahabad, dated Vikrama-*samvat* 1225 (A.D. 1169), records the announcement of *Mahanayaka* Pratapadhavala, the lord of Japila, to the effect that the Brahmanas of Svarnahala or Suvarnahala had bribed a servant of king Vijayachandra of Kanauj and had secured from him a forged copper-plate, by virtue of which they were fraudulently enjoying two villages. An inscription in the Panchayatana temple at Iswal, District Udaipur, refers to the Guhila king Mathanasimha. Of the inscriptions from Ujjayini, one gives the text of a Prakrit drama, another mentions the victory of a Paramara ruler over Ayodhya, and a third introduces one Ranarangamalla, who fought in a battle.

5

Five copper-plates were found at different places in District Ganjam. The first of them belongs to *Maharaja* Umavarman, the second to *Maharaja* Nandaprabhanjana, the third to *Maharaja* Jayavarman of the Svetaka branch of the Ganga dynasty, the fourth to *Maharaja* Samantavarman of the same branch, and the fifth to a Sailodbhava ruler.

6

In a collection in Calcutta were noticed two inscriptions. One of them, of the ninth century, records the dedication of an image by Maninaga; another, of the tenth century, records the dedication of an image by *sthavira* Dharmamitra of Vanga-*vishaya*, belonging to the Mulasarvastivada-*parishad*.

7

A copper-plate grant from Hilol, District Ahmadabad, records the gift of land by *Mahasamanta* Chandraditya during

the rule of *Maharajadhiraja* Kakka. A fragmentary inscription from Bahadurpur, District Nander, mentions Dantidurga, Krishna I and other rulers of the Rashtrakuta, Yadava or Tunga dynasty. An inscription from Hottul, in the same District, records the construction of a Siva temple by Side dhugi, a subordinate of the rulers of the Vahni-*kula*, who also installed the god Sthanu at Kalyana. At Tadkhel, also in the same District, were found two inscriptions mentioning the Western Chalukya rulers Trailokyamalla Somesvara I and Bhuvanaikamalla Somesvara II. About seventy Jaina inscriptions, ranging in date from 1238 to 1764, were found on image-pedestals at Ukhalad, District Parbhani. An inscription of the time of the Yadava king Ramachandra was found at Navasari, District Surat.

8

An inscription of the tenth year of the Eastern Chalukya king Vinayaditya Satyasraya (690) was found at Virareddipalli, District Anantapur. The Rashtrakutas are represented in the Andhra region by a Kannada inscription of the ninth century from Zafargadh, District Warangal; the name of the ruler is, however, not clear. A late Eastern Chalukya king, Sarvalokasraya Vishnuvardhana-maharaja, is mentioned in an inscription from Gopalapatnam, District Visakhapatnam. At Ravada, in the same District, was found a Tamil inscription, of the reign of the Eastern Ganga king Anantavarman Chodaganga, recording the grant to a temple by a merchant from Malaimandalam; the trade-contact between the eastern and western coasts that the inscription reveals is interesting. Engraved on a rock at Komarapalli near Hanamkonda in District Warangal was noticed an inscription, dated 1079, of the time of *Vikramachakrin Maha-mandalesvara* Beta II; this is the earliest inscription of the Kakatiyas so far noticed. An inscription of Ganapati of the same dynasty was found at Manthani, District Karimnagar. At Warangal, a poem on *Yoga-sastra*, composed by Narasimha-*maharshi*, the son of the *raja-guru* of Kakatiya Ganapatideva, was found engraved on a boulder. Another poem, composed by the

same author and similarly engraved, is a lyrical composition on a *siddha* couple. King Gunagarasa of the Satyasraya-*kula* is mentioned in an inscription, dated 1006, from Narayanagiri, District Warangal. The Chalukya chief Narayanadeva Pudolarasa is known to have made a gift in the third year of Vikrama-chola (1121-22) from an inscription from Mundlapudi, District Chittoor. An inscription from Dimili, District Visakhapatnam, dated 1192-93, refers to the ruler Kulottunga Prithvisvara, son of Jayamamahadevi. A fourth-century Tamil inscription from Gajulapelluru, in District Chittoor, mentions the ruler Rajagandagopala. A few Telugu inscriptions of the sixth century in the Vishnu and Siva temples at Yadiki, District Anantapur, record transactions related to the lending of money either by the temple-authorities or by private individuals.

9

Several Western Chalukya records were discovered in Mysore. King Vikramaditya is eulogized in a temple-inscription at Jalasangvi, District Bidar. The construction of three temples in the time of Trailokyamalla is mentioned in an inscription from Shirhalli, District Gulbarga. King Tribhuvanamalla is referred to in a pillar-inscription from Sedam in the same District. Several inscriptions of the dynasty were found in District Raichur. One of them, dated 1014, pertains to the last few months of the reign of Vikramaditya V. Another, belonging to the year 1066, refers to a chief named Marapermaladeva, who seems to have fought against the Cholas, and to a Kadamba feudatory Nagavarmarasa. A third inscription, belonging to the reign of Vikramaditya VI and dated 1119, refers to another Kadamba chief Butarasa. Butarasa's son Madhavattirasa is mentioned in a fourth inscription, dated 1135, belonging to the reign of Bhulokamalla Somesvara. The Kadamba chief Singarasa is mentioned in an inscription from Halkavatigi. An inscription from Nagavanda mentions the death of one Bachiga of Nagarjuna in 1120.

Two Kalachuri inscriptions were noticed. One of them found at Nimbal, District Bijapur, and dated 1186, is a spurious

copper-plate grant of the reign of Sankamadeva. The other is a stone inscription from Yemmiganpur, District Dharwar; dated 1202 in the reign of Rayamurari Sovideva, it records that one Sovi-setti, while proceeding to the north in connexion with his business, fell in a fight with robbers.

Of the Rashtrakuta records in District Dharwar, one, from Kachchavi, mentions the ruler Dharavarsha Dhora. Another inscription, found at Anaji, belongs to the reign of Amoghavarsha. Three inscriptions from Arlikatti, all dated 930, pertain to the reign of Govinda IV. At Kodamaggi in the same District was found an inscription of the time of the Yadava ruler Simhana; it refers to a Sinda chief Bommidevarasa.

The construction of a Jaina temple is recorded in an inscription on an image of Parsvanatha, found near Shimoga.

10

A copper-plate grant of the Pallava ruler Simhavarman (*circa* 550-75) was found in District Tanjavur. This is the earliest Tamil copper-plate inscription of that dynasty. Another grant, of the Pandya king Parantaka Viranarayana Sadaiyan, was found at Dalavayapuram, District Tirunelveli.

Considerable light on the administration of the temple at Suchindram, District Kanyakumari, is thrown by the inscription, dated 1228, found in that temple. At the same place was found an inscription of the time of Solantalaikonda, Virapandya. A few inscriptions in the museum at Padmanabhapuram, District Kanyakumari, record the establishment of a refugee-colony. Finally, an inscription of the Hijri year 736 (1335), found at Velangudi, District Ramanathapuram, records the gift of land to a person for his heroic exploits.

11

Of the Arabic and Persian inscriptions, the following deserve mention.

At Bari Khatu, District Nagaur, were noticed two inscriptions of the Mamluk (Slave) dynasty. The earliest of them is dated 1232, in the reign of Iltutmish, and records

the excavation of a tank. Another fragmentary inscription, dated 1268, pertains to the reign of Ghiyathu'd-Din Balban. A third inscription from the same place is dated 1360, in the reign of Firuz Shah Tughluq, and refers to a religious war in which six persons died.

Of the reign of Firuz Shah Tughluq several inscriptions were found in Uttar Pradesh. One of them, dated 1364, is from Jaunpur; another, dated 1363, is preserved in the Allahabad Museum; two others, dated 1375, are from Varanasi. All of them refer to the construction of mosques, etc.

An inscription from Belgram, District Hardoi, refers to the construction of the Jami' mosque of the town in the reign of Ibrahim Sharqi.

Two inscriptions from Kalna, District Burdwan, were removed to the Indian Museum, Calcutta, last year. One of them belongs to the reign of 'Alau'd-Din Husain Shah and the other to that of 'Alau'd-Din Firuz Shah, son of Nusrat Shah.

Three early Mughul inscriptions were also found at Bari Khatu mentioned above. They were all composed by Mir Muhammad Mas'um of Bhakkar, a well-known nobleman and *litterateur* of the court of Akbar, and his son Mir Buzurg. One of them states that in 1601-02 Muhammad Mas'um was permitted by Akbar to proceed as an envoy to Iraq (as Iran was then called).

OTHER DISCOVERIES

As a result of explorations and chance-discoveries, a large number of ancient sites were brought to light in 1958-59. Below are mentioned only a few of them.

1

Sites with palaeolithic tools (Series I) were discovered at several places : in the valleys of the Soner, Kopra and Bearma, all tributaries of the Ken, in Bundelkhand; in the valley of the upper Narmada (where a large number of animal-fossils were also found); in Districts Gwalior, Mandasor, Indore, Jabalpur, Chanda and Amraoti; in the valleys of the Luni

and Banas and their tributaries in southern Rajasthan; in District Sabarkantha; in the valley of the Tapti in District West Khandesh; in Districts Keonjhar, Dhenkanal and Mayurbhanj; and in the valley of the Gundlakamma in District Kurnool. Animal-fossils were found at the foot of the Siwaliks in District Hoshiarpur and Bilaspur.

Tools of Series II were found at even a larger number of places, only a few of which, such as Maheswar on the Narmada, had tools of both Series I and II. Tools of Series II were discovered in the regions of Madhya Pradesh, Rajasthan and Bombay mentioned above. In addition, they were also found in the following regions : the valleys of the Bhadar and Goma in Saurashtra and of the Mula and its tributaries in District Ahmadnagar; District Bijapur; the valleys of the Baitarani, Khedkai and other rivers in Districts Keonjhar and Mayurbhanj; and Districts Medak and Kurnool.

Neoliths were discovered in Districts Mayurbhanj, Keonjhar, Dhenkanal, Dharwar and Mysore. Microliths, unassociated with pottery, were found in southern Rajasthan and in Districts Agra, Indore, Jabalpur, Sagar, Nimar East, Nimar West, Banaskantha, Jhalawar, Kaira, Madhya Saurashtra, Ahmadnagar, Keonjhar, Puri and Kurnool.

A painted rock-shelter was found in District Sagar. A very large number of them were seen to occur in District Mandasor.

2

A dozen Harappa sites were found in District Madhya Saurashtra, one of which was found to contain a cemetery as well. Another such site was located in District Halar.

In the north, a Harappa site was found in District Bhatinda.

Chalcolithic sites, characterized by the occurrence of microliths and painted red or black-and-red pottery, were found at several places: on the Banas and its affluents in south-east Rajasthan; in Districts Jaipur, Indore, Mandasor and Broach; in the Tapti valley in District West Khandesh; in Districts Nasik, Ahmadnagar and Bijapur; and even further south, in District Madurai.

The Painted Grey Ware was found at some sites in Districts Ajmer, Jaipur and Bhind, in addition to several other sites in the upper Ganga valley.

3

Stone circles of the megalithic complex were found at Koisaram and Balajigutta, in District Hyderabad. Cairn-circles, dolmens and urn-burials were also brought to light at several places in Districts Coimbatore, Dharwar and South Arcot.

4

Mud *stupas* were noticed near Jaimangalgarh in District Monghyr and at Lakshmipur-Sater in District Darbhanga.

A large number of loose sculptures of the second and first centuries B.C. were found in the Buddhist caves at Pitalkhora, District Aurangabad. In addition, four crystal reliquaries were recovered. A group of Buddhist caves was discovered at Khambhalida in District Madhya Saurashtra.

At Mohida-tarf-Haveli in District West Khandesh was noticed a group of Jaina caves. Being excavated in the bed-rock of the Gomai, they remain filled with water.

Gupta and post-Gupta temples and sculptures were found at Chhapara and Parsora in District Bhilsa and in the vicinity of Deogarh, District Jhansi.

MUSEUMS

The collections in the museums were enriched by the additions of valuable antiquities, of which some are noticed below.

1

The National Museum, New Delhi, acquired, among other objects, a large number of stone sculptures of the southern schools, manuscripts and coins. Palaeoliths from Chota Nagpur, early pottery from Harinarayanpur, 24-Parganas, a Nepalese bronze image and a large number of coins were among the acquisitions of the Indian Museum, Calcutta.

2

The Rajputana Museum, Ajmer, acquired a *tirthankara* mage dated 1152-53. The Baroda Museum acquired Brahmanical images from District Sabarkantha, and the State Museum, Bhubaneswar, Buddhist and Jaina images and copper-plates from many places in Orissa. Fragments of a *stupa*-railing from near Bharhut were obtained in the Prince of Wales Museum, Bombay.

The acquisitions in the State Museum, Lucknow, mostly consisted of neolithic celts, stone sculptures, terracottas, beads, pottery and bricks, from different places in Uttar Pradesh, and a large number of coins. The State Museum, Gauhati, received in its collection a stone and a terracotta image of Vishnu and a large number of Ahom coins. The Patna Museum acquired a bronze figure of Devi from Chela, District Shahabad, and miscellaneous coins. The Chandradhari Museum, Darbhanga, acquired Brahmanical and Buddhist sculptures from different places in Bihar and bronzes from Tibet.

Megalithic pottery and medieval stone sculptures, including a group of Vishnu, Bhu-devi and Sri-devi, metal images and coins formed the chief additions to the collection of the Government Museum, Madras.

3

The Asutosh Museum, Calcutta, acquired terracotta figurines and pottery of the early historical period from different places in West Bengal and stone and metal sculptures and coins from diverse sources.

Early historical seals and terracottas from different sites in Uttar Pradesh were acquired in the Allahabad Museum. An interesting Kushan sculpture was found at Noh, District Bharatpur, and was housed in the Museum at Amber. A beautiful image of Uma-Mahesvara was obtained in the Archaeological Museum, Khajuraho.

PRESERVATION OF MONUMENTS

A vast number of monuments of national importanec were attended to by the Department by way of upkeep and

annual and special repairs. Only a very few of them can be noticed here. Some State Governments also looked after the monuments in their charge.

1

In the Central Circle, the removal of the soft material from the roof of Caves 4 to 6 at Bagh, District Dhar, was continued, and the hard rock exposed. This has resulted in a considerable lessening of the leakage in the caves. At Burhanpur in District Nimar East, the major repairs to the *minar* progressed. The decayed veneer-stones were replaced. Proper bonding has to be provided between the encasement-wall and the central pillar.

2

In the Eastern Circle, the Karenghar palace at Joysagar, District Sibsagar, received attention: a considerable portion of the palace, buried under earth, was exposed. The *stupa* at Ratnagiri, District Cuttack, excavated in 1957-58, was made watertight and the damaged parts of the facade made good. A smaller *stupa* was rebuilt with old material.

In the Sun temple at Konarak, District Puri, grouting of the interior of the main temple by drilling holes and pouring in liquid mortar was initiated to make the structure watertight.

In West Bengal, important repairs were carried out at several monuments, including those at Gaur and Pandua, District Malda, and at and near Murshidabad. At this last place, the dome of the mosque of Murshid Quli Khan, half of which had fallen in an earthquake, was reconstructed. At the Gunavati temples at Udaipur, Tripura, extensive repairs were undertaken.

3

In the Mid-eastern Circle, the base of the Dhamekh Stupa and some structures in the Main Shrine at Sarnath, District Varanasi, were repaired. At Nalanda, District Patna, the undermined and salt-eaten bricks in the walls of Sites 5 to 8

were underpinned. Parts of the north gate and the wall of the New Fort at Rajgir, in the same District, were repaired.

4

The Northern Circle attended to the temples at Khajuraho in District Chhatarpur. The plinth of the Gupta temple at Nachna-Kuthara, District Panna, was exposed down to the original ground-level.

In the fort at Agra, the fallen upper part of the *guldasta* at the west corner of the Naubat-khana was re-set in position. On the inner side of northern archway of the Naubat-khana, traces of original paintings were noticed. Extensive repairs to the fallen part of the Moti-Masjid were taken in hand.

Excavation at the foundation of the Taj Mahal at Agra on the river-side showed that the structure had been raised on well-foundations. The north-eastern *minar* of the monument was taken up for extensive repairs. Many monuments at Fatehpur Sikri, District Agra, were repaired according to requirements. The cracked arches in Akbar's tomb at Sikandra, District Agra, are being made good.

5

In the North-western Circle, important work continued at the Jami'-Masjid, Delhi. Decayed stones were replaced, holes and open joints were filled and the porous concrete on the roof was taken out. Some monuments in the Red Fort, Delhi, such as the Rang-Mahal, Diwan-i-'Am and Khas-Mahal, were attended to. In the Lal-Kot, Delhi, the damaged walls by the road-sides were extensively cleared and repaired. In the Kotla Firuz Shah, New Delhi, the area between the eastern boundary-wall and the pyramidal structure with the pillar of Asoka was excavated down to the original level.

6

The South-eastern Circle carried out major repairs at the Raja-Mahal and Rani-Mahal at Chandragiri, District Chittoor, the fort and gateway at Siddhavattam, District Cuddapah, and the fort at Golconda, District Hyderabad.

The Buddhist remains at Salihundam, District Srikakulam, were attended to.

In the Lakshmana temple at Sirpur, District Raipur, various improvements were effected.

7

The Southern Circle preserved the woodwork of the palace at Mattancheri, District Trichur. It also attended to the Five Rathas at Mahabalipuram, District Chingleput, by way of the levelling of the ground and construction of drains.

The fort at Vellore, District North Arcot, was improved by the removal of heaped-up earth from the top of the rampart, replacement of dislodged steps, etc. Earth was cleared from the front of the Brihadisvara temple at Tanjavur and the ground levelled.

The old dungeon, fort and gateways at Bangalore were attended to in various ways. At Sravanabelgola, District Hassan, the terrace of the *mandapa* over the entrance of the Akkana-Basti was repaired. The tilted pillars were re-erected in an upright position. In the course of clearance six pieces of marble Jaina images were found. In the Kesava temple at Somanathpur, District Mysore, the floor around the temple and the terrace over the corridor were re-laid.

8

In addition to a large number of other monuments, the South-western Circle attended to the rock-cut caves at Ajanta, Ellora and Pitalkhora in District Aurangabad, Bhaja and Karla in District Poona, Kanheri in District Thana and Nasik. The work generally consisted of the replacement of masonry pillars erected in the past by reinforced concrete.

The group of temples at Aihole and Pattadakal, District Bijapur, and a few monuments at Bijapur and Bidar also received attention.

9

The Western Circle continued to pay careful attention to the monuments in the fort of Chitorgarh. The southern part

of the palace of Ratansingh, the Kukkutesvara temple, the Sringar-chauri and the Nagar-khana and Zanana-Mahal in Rana Kumbha's palace were repaired. The group of temples at Badoli, District Chitorgarh, was also attended to.

Extensive clearance was undertaken at the Uparkot caves at Junagadh, District Sorath, to trace cracks responsible for leakages in the roof; many interesting features and antiquities were thus brought to light.

ARCHAEOLOGICAL CHEMISTRY

The Chemistry Branch of the Department administered chemical treatment to monuments, paintings and excavated and museum antiquities. Below is a brief summary of its activities.

1

The paintings in a large number of monuments were chemically cleaned and preserved. Such monuments included those at Ajanta and Ellora, District Aurangabad, Bagh, District Dhar, Tanjavur, Lepakshi, District Anantpur, Srirangapatna, District Mandya, Agra, Chanda, Fatehpur Sikri, District Agra, and Allahabad.

The following are some of the monuments which were chemically treated for moss and lichen, exfoliation of stone, etc.: the temples at Markandi, District Chanda, the Kandariya-Mahadev temple at Khajuraho, District Chhatarpur, the Chausath-Yogini temple at Bheraghat, District Jabalpur, the rock-cut caves at Udaigiri, District Vidisha, the cave-temple at Tirumalaipuram, District Tirunelveli, the Lingaraja and Rajarani temples at Bhubaneswar, District Puri, and the temple at Baijnath, District Kangra. Special mention may be made of the work at the Gomatesvara statue at Sravanabelgola, District Hassan.

2

The geochronological investigation of the soils from the microlithic site of Birbhanpur, District Burdwan, was continued. Soil-samples from the excavation at Lothal are being examined.

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